TECHNICAL BOOK REVIEW INDEX

Published monthly, except July and August, by Special Libraries Association. Entered as second-class matter September 25, 1940 at the Post Office, at Pittsburgh, Pa., under the Act of March 3, 1879. Compiled and edited in the Technology Department, Carnegie Library of Pittsburgh, 4400 Forbes St., Pittsburgh 13, Pa. Subscriptions, renewals, and orders for back numbers should be sent to Special Libraries Association, 31 East Tenth St., New York 3, N. Y. Price $7.50 a year in the United States; $8 elsewhere.

JULIA C. WALLACE, *Editor*

Volume 17 | **December, 1951** | **Number 10**

THE purpose of the Technical Book Review Index is primarily to identify reviews in current scientific, technical, and trade journals; secondarily, when feasible, to quote from these reviews. In the evaluation of scientific and technical books, reviews, constitute the best existing source of information. The service of the Technical Book Review Index is thus in the field of evaluation, rather than in competition with existing publications which announce new and forthcoming books, list books by subjects, or supply bibliographic information. Each quotation immediately follows the name of the journal from which it is taken. Obviously, these brief extracts, detached from the context, must not be accepted as conclusive. Except for the correction of obvious errors, the bibliographic information is as given in the reviews. It is, therefore, in many cases incomplete and in some cases probably inaccurate.

Abraham, Max. Classical theory of electricity and magnetism. Ed.2, revised by Richard Becker and translated from the German by John Dougall. 289p. 1950. Blackie, London, 25s. net.

Science progress, Oct. 1951, p.731. ¼ p.

"The fact that the first English edition passed through . . . many reprintings is in itself a commentary on the usefulness of the book and there is no reason why this second should not continue as a standard work for both mathematics and physics students, although the latter will require to supplement it with a book written from a more experimental viewpoint." *W. E. Duncanson.*

Adams, Roger. See **Organic reactions.**

Ahrendt, William R., & Taplin, J. F. Automatic feedback control. 412p. 1951. McGraw, New York, $7.50.

American machinist, Oct. 29, 1951, p.198, 200. ⅔ col.

"This is the scope of the book: what feedback is, how it works, where it works, and the influences on it . . . Covers all manner of feedback systems, including such as servomechanisms, temperature controls, speed governors, electronic devices, hydraulic systems, and the basic theories and devices that feedback control is based upon. There is a section of problems for classroom work, a bibliography, glossary, and an appendix with various mathematical and physical data necessary for use in calculations of problems."

Electrical world, Nov. 19, 1951, p.185. ⅛ col.

"While mathematical in early treatment the authors have taken unusual pains to interpret the differential equations in terms of the physical counterparts. In addition the subject matter is organized in logical, classified sequence so that the reader can readily follow the development. One feature that other authors could emulate is the listing up front of symbols used through the book with a parallel listing of the pages on which each is defined, explained, or first used. The latter half deals with discontinuities, servomechanism, pneumatic controls, temperature regulation, speed governing, flow and level of liquids."

Aiken, Daymond J., & Henderson, K. B. Algebra; its big ideas and basic skills. 409p. 1950. Harper, New York, $2.48.

School science and mathematics, Nov. 1951, p.674. 1 p.

"As a teacher who first studied algebra more than a generation ago, one is filled with regret that he could not have studied from as attractive a book as this one; as a college teacher one would be indeed happy if students grasped the material presented in this text. The organization is around concepts which the authors call 'big ideas.' There are seven of these concepts: general numbers, equations, signed numbers, dependence and relationship, graphical representation, exponents, and indirect measurement . . . The book as a whole is unquestionably superior and by all means should be considered in connection with a change of text." *Cecil B. Read.*

Albert, Adrien. Selective toxicity. 228p. 1951. Methuen, London, 7s. 6d. (Wiley, New York, $1.75.) (Methuen's monographs on biochemical subjects.)

Chemical week, Sept. 29, 1951, p.46. ¼ col.

"Deals with those substances which injure some kinds of cells and not others . . . The author emphasizes the mode of action—the physical and chemical means—by which toxicants act upon cells; for this knowledge gives an indication of the nature of other selective toxic agents."

Alexander, Albert E. Surface chemistry. 70p. 1951. Longmans, New York, 7s. 6d. net.

Chemical trade journal and chemical engineer, Sept. 7, 1951, p.556. ¼ col.

"Intended only as a short and elementary

treatment of its subject, but its author is undoubtedly successful in giving the student with some knowledge of elementary science, a good idea of the underlying principles and applications of surface chemistry."

Electrician, Nov. 2, 1951, p.1376. ⅝ col.

"Chapter 1—an outline of historical development of surface chemistry is extremely interesting . . . Although extremely brief, the last chapter (VI) is, perhaps, the one of most interest to electrical engineers. In it, the author discusses electro-capillarity, electrophoresis, electro-osmosis, and frictional (static) electricity. The references in Chapter IV to filament lamps and thermionic tubes are worth noting."

American Paper and Pulp Association. Dictionary of paper, including pulps, boards, paper properties and related papermaking terms. Ed.2; edited by Clarence J. West. 393p. 1951. The Association, New York.

Bulletin of the Institute of Paper Chemistry, Sept. 1951, p.90. ⅝ p.

"Maintains the high degree of acceptability established by the first edition. The compilers have largely retained the form and content of that good foundation, but where the ever-changing and dynamic nature of the pulp and paper industry has made it necessary, they have carefully deleted the obsolete, modified the present, and added the new . . . It is a pleasure to recommend this second edition . . . to anyone who has need of the most complete and authoritative source of definitions related to the pulp and paper industry." *D. J. MacLaurin.*

Bailey, Benjamin F., & Gault, J. S. Alternating-current machinery. 421p. 1951. McGraw, New York, $6.

Journal of the Franklin Institute, Oct. 1951, p.362. ⅝ p.

"The volume appears to be up-to-date as well as basically sound. It should be a pleasure to use this book for the instruction purposes for which it is intended although there will perhaps be little demand by those desiring a complete reference on the engineering aspects of a-c. machinery." *C. W. Hargens.*

Product engineering, Oct. 1951, p.285. ½ col.

"This new college text for use in undergraduate courses in alternating-current machinery includes study of transformers and the principal kinds of synchronous and induction machines, both polyphase and single-phase. In addition to construction and theory of operation of each type, the book covers connections, applications, and methods of control. Several special machines and applications are treated briefly . . . Very few design formulas are included . . . Where it is helpful, the use of mathematics is not avoided . . . The material covered is suited to the needs of all electrical engineering students, regardless of their specialized interests."

Behrens, Charles F., ed. After the A bomb? 182p. 1951. Nelson, New York, $2.50.

United States armed forces medical journal, Nov. 1951, p.1769. ¼ p.

"Describes in concise and practical form both the broad and detailed plan of organization for the management of atomic bomb casualties . . . Divided into eight convenient chapters dealing with general considerations, rescue and first aid, care of burns, treatment of radiation illness, hospital and public health problems, and the management of personnel contaminated with radioactive materials, each chapter contributed by an expert in his particular field. A table of remedial agents is included . . . A reasonably extensive bibliography and handy index are included." *O. A. Wurl.*

Billman, John H., & Cleland, E. S. Methods of synthesis in organic chemistry. Ed.2. 229p. 1950. Edwards Bros., Ann Arbor, Mich., $2.75.

Journal of chemical education, Sept. 1951, p.504. ⅝ col.

"Intended as a 'study guide,' or as a supplement to a textbook, for students of elementary organic chemistry. It is not in any sense a laboratory manual . . . Many students of elementary organic chemistry should find this book quite useful." *Donald C. Gregg.*

Blum, Harold F. Time's arrow and evolution. 222p. 1951. Princeton Univ. Press, Princeton, N. J., $4.

American scientist, Oct. 1951, p.725. 1⅝ col.

" 'Time's arrow' is Sir Arthur Eddington's apt designation for the second law of thermodynamics. The term implies that this law 'points the direction of all real events in time, although giving no indication of the speed with which they happen.' In this highly informative and thought-provoking book, Dr. Blum explores the relationship between 'time's arrow' and organic evolution. It is an important contribution to evolutionary thought and deserves the wide attention that it is certain to receive."

Bonner, N. A. See **Wahl, A. C., & Bonner, N. A., ed.**

Brinkley, Stuart R. Principles of general chemistry. Ed.4. 703p. 1951. Macmillan, New York, $5.

Journal of chemical education, Oct. 1951, p.556. ⅜ col.

"The fourth edition . . . is very much like the earlier editions in selection and order of material, presentation, and general make-up. The author's statement that 'it is intended primarily to provide a thorough background for students in the more advanced sections of the course, who plan to continue their study of this subject' and also for other 'qualified students,' is apparent to one who critically examines the book . . . The author has made a clear and understandable presentation of material. Included are a reasonable number of appropriate illustrations, each clearly referred to in the text." *Fred C. Freytag.*

British Aluminium Company, Limited. Aluminium in the chemical and food industries. Ed.2. 150p. 1951. The Company, Salisbury House, London Wall, London, E.C.2, gratis.

Chemical age, Oct. 13, 1951, p.503. ⅔ col.

"The publishers present with this book a praiseworthy contribution to technical literature and although its circulation has unavoidably to be rigidly limited, it is hoped that it will be accessible in scientific and technical libraries all over the country." *F. N.*

Metal industry, Nov. 2, 1951, p.390. ¼ col.

"Brought up-to-date and made as comprehensive as possible . . . Divided into three chapters each with its various sub-headings. The first chapter deals with the general properties of aluminium and its alloys; the second with the action of various substances on aluminium and its alloys, and the third with methods of testing corrosion resistance. There are many diagrams and illustrations included . . . Invaluable to the users of aluminium for chemical or food applications."

Buchanan, Robert E. Bacteriology. Ed.5. 678p. 1951. Macmillan, New York, $6.

School science and mathematics, Nov. 1951, p.672. ⅝ p.

"Incorporates all the recent advances made in the field and broadening, as well, the scope of the field covered, yet not burdening it with medical specialties . . . Still a text which can be used for a general introductory course in microbiology, and it measures up to the fine standards set by this text since its first edition in 1913. The subject material is well organized and well illustrated . . . Appears to be the sort of book which could be easily adapted to classroom and laboratory work." *George S. Fichter.*

Bull, Sleeter. Meat for the table. 240p. 1951. McGraw, New York, $3.25.

American scientist, Oct. 1951, p.744. ½ col.

"Mrs. Mather assures me that this is an excellent book for the wife of a scientist to read. Its information and advice will enable her to provide him and his family with a better balanced and more satisfactory diet at less cost. This alone should be sufficient justification, these days, for reserving a place for it on our crowded bookshelf. There is, moreover, much here that the scientist himself should read."

Burgess, Charles O. Advantages of the gray iron casting process and products. 28p. Gray Iron Founders' Soc., 210 National City-East Sixth Bldg., Cleveland, $1.50.

American metal market, Nov. 2, 1951, p.2. ⅛ col.

"Of considerable importance to designers and manufacturers faced with the problem of the production of new or improved products . . . Shows how functional improvements stem from simplicity and great design freedom only possible in castings . . . Explains the advantages of gray iron as a casting material, its general availability and ultimate low cost . . . Will be of special significance to engineers in the present period of shortages."

Canadian machinery and manufacturing news, Nov. 1951, p.177. ½ col.

"Third of a series of manuals issued by the society, each a preprint of a chapter that will ultimately make up the forthcoming Gray Iron Handbook . . . The advantages are divided into three groups, functional advantages of castings, economic advantages of the casting process as a manufacturing method, and a comparison of grey [sic] iron with other cast metals."

Cable, Emmett J., and others. Physical sciences. Ed.3. 496p. 1951. Prentice-Hall, New York, $7.35 (Schools, $5.50).

Chemical week, Sept. 22, 1951, p.40. ¼ col.

"All five main sections—chemistry, physics, astronomy, geology and meteorology have been revised to include recent developments or modifications in theory or practice. Discussed here in the light of new scientific knowledge are the subjects of silicones, atomic energy and the means of studying atomic structure. This book is especially applicable as a survey course in physical science."

Nature magazine, Nov. 1951, p.453. 10 l.

"Directed to two general audiences. One comprises the college freshman who is preparing to teach. The other includes individuals who feel the need of an intelligent acquaintance with the various sciences but cannot devote time to foundation courses in the separate fields. Many changes have been made in this latest edition."

Carr, T. H. Electric power stations. Ed.3. v.2. 821p. 1951. Chapman & H., London, 75s. net.

Water power, Oct. 1951, p.393. ⅜ col.

"A competent production in every respect; the author has an eye for fundamentals, develops all his reasoning from first principles and writes with great clarity. A foreword by the late Sir Leonard Pearce admirably sums up the *raison d'etre* of this comprehensive work: 'So great have been the advances in the many branches of engineering involved in the construction of electric power stations, that there has been a great tendency for individual engineers to specialise in a particular branch, but one important attribute of a good engineer is to have a breadth of view, and the present book will, I am sure, be of great assistance in enabling specialists to maintain contact with branches of engineering other than their own'."

Chapman, Sydney. The earth's magnetism. Ed.2, revised. 127p. 1951. Methuen, London, 6s. (Wiley, New York, $1.50.) (Methuen's monographs on physical subjects.)

Electrical world, Nov. 5, 1951, p.198. 9 l.

"Data from all the world has been compiled and plotted by this Oxford professor to show the magnitude and various cyclic variations of the earth's magnetism. The hypotheses about the origin of the magnetism and the causes of the variations are presented with special stress on the 'dynamo' theory and on the relationship of cycles to the sunspots."

Journal of the Franklin Institute, Nov. 1951, p.444. ⅓ p.

"Changes in this edition are minor, but all of such character as to add to the book's value, since they incorporate the results of the more recent investigations . . . The text is brief . . . It suggests, rather than details, the painstaking analyses which are required to separate the many phenomena which enter into a description of the earth's magnetic field and its variations." *Alan C. Byers.*

Cofield, E. P., jr. Solvent extraction of oilseed; an informational survey. 103p. 1950. Georgia Inst. of Technology, Atlanta, Ga., $1.50.

Canadian chemical processing, Sept. 1951, p.761. ¼ col.

"Primarily concerned with the process of solvent extraction, its capabilities and limita-

tions, the types of equipment used and under development, the applicability of the process to various Georgia-grown oilseeds, its economic aspects, and the research opportunities that it offers."

Cooke, Richard G. Infinite matrices and sequence spaces. 347p. 1950. Macmillan, New York, $6.50.

Mathematical reviews, Oct. 1951, p.694. 1¼ col.

"Intended to cover the theory of infinite matrices and its application to the theory of summation, further the theory of spaces whose elements are sequences of numbers . . . Clearly written and . . . exhaustive in several interesting topics. As a book on general methods of summation, it is a welcome addition to Hardy's Divergent series . . . with which it does not overlap." *G. G. Lorentz.*

Corliss, John J., & Berglund, W. V. Plane trigonometry. 388p. 1950. Houghton, Boston, $3.

School science and mathematics, Nov. 1951, p.678. 1 p.

"This text not only emphasizes the topics which form the basis for advanced work, it also, through its methods of presentation, makes a serious effort to condition the student's mind for the kind of thinking necessary for effective study at higher levels. Yet it is not a difficult treatment and appears to be quite teachable." *Frank B. Allen.*

Creamer, Walter J. Communication networks and lines. 353p. 1951. Harper, New York, $6.

Midwest engineer, Oct. 1951, p.27. ⅓ col.

"Brings together a large body of material dealing with the mathematical treatment of communication networks and lines . . . Designed as a text book for colleges, for Army Signal Corps training courses, and for the practicing communication engineer . . . The subject matter is well organized and logically developed. Liberal use is made of examples and typical problems. There are eight appendices which provide pertinent formulas, charts, and tables, and a comprehensive index." *H. P. H.*

Crouse, William H. Automotive chassis. 106p. 1951. McGraw, New York, $1.20.

Australasian engineer, Aug. 7, 1951, p.119. ½ col.

"A combination shop guide, study guide, notebook, and work-progress report and is designed to cover every basic job on the subject. In addition, it contains shop and laboratory exercises which instruct students on the construction and operation of the auto chassis, clutches, transmissions, rear axles, universal joints, springs, shock absorbers, steering systems, front suspensions, and brakes . . . It is the aim of the workbook to train high-calibre automotive mechanics to a stage where they can take their proper place in the automotive servicing profession, and therefore the book, with its disassembled views of many motor units, and clear illustrations of other parts, will prove a great asset to the keen and eager mechanic."

Cullimore, M. S. G., & Pugsley, A. G. Torsion of aluminium alloy structural members. 60p. 1951. Aluminium Development Assoc., 33 Grosvenor St., London, W.1, 7s. 6d.

***Surveyor,* Sept. 1, 1951, p.550. ⅝ col.**

"Deals with the behaviour in torsion of some of the newer structural sections in aluminium, the experiments relating to sections in non-uniform as well as those in uniform torsion."

Dome, Robert B. Television principles. 291p. 1951. McGraw, New York, $5.50. (McGraw-Hill television series.)

Electrical manufacturing, Sept. 1951, p.216. ⅓ col.

"This practical treatise on principles and theory of all stages of television transmission and reception traces picture signal from origin to reproduction on receiver . . . Mathematics is used rather freely throughout the book as a means of supplementing and illustrating text."

Radio & television news, Nov. 1951, p.116. ½ col.

"A practical exposition of the subject of television at an engineering level . . . The author has pre-supposed a working knowledge of a.c.-d.c. theory, radio frequency phenomena, circuits, vacuum tubes, and a better-than-speaking acquaintance with calculus . . . Ideally suited for the radio engineer or the engineering student who wishes to expand his working knowledge to include the field of television."

Radio-electronics, Nov. 1951, p.131. ⅛ col.

"Written primarily for radio engineers by an author recognized by engineers as an authority in the field, this book differs considerably from others with similar titles. Possibly the most striking is brevity. The book contains fewer pages than most of its type . . . The explanations seem as clear and complete as some of their more verbose parallels. Mathematics is rather freely used in explaining circuit action. However, most of it is simple algebra . . . and the mathematics, like the text, is so organized as to be most easily understood." *F. S.*

Duddle, Robert S. The craft of the metal worker. 160p. 1951. Technical Press, London, 17s. 6d. net.

Ironmonger, Sept. 29, 1951, p.58. ½ col.

"As an introduction to the study of metalworking, Mr. Robert S. Duddle's new book . . . can be commended without hesitation. The author has aimed at outlining the principal processes as simply as possible, no more than that; and he has done it well. A special feature . . . is the space given to the craftsman's tools and equipment . . . There are over 280 illustrations—excellent drawings every one of them—and nearly all are of tools."

Dull, Raymond, & Dull, Richard. Mathematics for engineers. Ed.3, revised. 822p. 1951. McGraw, New York, $7.50.

Electrical world, Nov. 5, 1951, p.198. 10 l.

"Designed primarily to be a reference book rather than a text. The problems are worked out for application of the mathematical tools. The new material extends the treatment of differential equations, and adds a chapter on dimensional and similarity analysis. The latter embraces the Buckingham pi method for numerous variables."

Product engineering, Nov. 1951, p.288, 290. ⅝ col.

"This treatise on mathematics has been prepared primarily for engineers. Included are engineers (1) who want a quick and convenient reference, (2) who have become somewhat rusty

in applying mathematics, and (3) who feel the need of a text for the study of mathematics . . . Concise yet complete, covering every phase of mathematics the engineer is likely to meet . . . Many graphical explanations and illustrative examples enhance the reader's understanding of the subject and enable him to successfully apply the methods set forth, in solving mathematical problems and equations in engineering."

Tool engineer, Nov. 1951, p.112. ⅓ col.

"New material . . . includes a chapter on Dimensional Analysis and Similarity Analysis, which is a useful tool for predicting the functional form of physical relationships. Another new chapter, on Differential Equations, supplies a number of illustrative examples which show how to recognize and solve the types of these equations which occur most frequently in engineering. A fuller treatment has been given to the many practical applications of the Infinite Series in the engineering field, and the section on trigonometric functions has been expanded."

Dunn, L. C., ed. Genetics in the 20th century. 634p. 1951. Macmillan, New York, $5.

American scientist, Oct. 1951, p.727. 1½ col. including another review.

"The 26 papers comprising the [book] . . . provide a well-integrated survey of both the factual foundations and the widely ramifying applications of the science of genetics. The authors include many well-known workers in this field in American institutions, as well as Caspersson and Müntzing from Sweden, Ephrussi from France, and Mather, Darlington, Penrose, and Huxley from England. There are papers on the relation of genes and chromosomes, chemical aspects of the cell nucleus, biometrical genetics, and the role [sic] of the genes in cytoplasmic inheritance, as well as on the impact of genetics on immunology, plant and animal breeding, plant pathology, and the cancer problem."

Dyson, Fred. Principles of mechanism. Ed.4. 368p. 1951. Oxford Univ. Press, London, 16s. net.

Engineering, Sept. 14, 1951, p.352. ⅓ col.

"The author decided to restrict the fourth edition approximately to meet the requirements of students taking the first part of the final examinations for a university degree in engineering. Thus the present text is substantially the same as that of the third edition, though the appendix has been revised and enlarged so as to include an improved system of notation adopted for the Coriolis component of acceleration . . . Mr. Dyson has succeeded in presenting in a comprehensive manner the large amount of subject-matter which is sometimes called the theory of machines."

Edwards, Richard B., ed. Frontiers of personnel administration. 160p. Dept. of Industrial Engineering, Columbia Univ., New York, $12.50.

American machinist, Nov. 12, 1951, p.260, 262. ⅓ col.

"While this book contains the reports and papers of Columbia's 1951 Conference on Industrial Personnel, it goes far beyond the usual publication of conference proceedings . . . Attractively designed and well organized. Each subject is presented in a separate section that begins on a right-hand page and consists of multiples of four pages. Reprints of any individual section, therefore, can be provided for training purposes. Within each section, liberal use of cross-heads again indicates major subject classification, and both introductory background explanations and summaries are found in several sections."

Modern machine shop, Oct. 1951, p.388, 390. ⅝ col.

"Comprises the reports and papers of the meetings which were conducted during the 1951 Conference of Industrial Personnel held March 19-23 at Columbia University. Material in the book is arranged according to subject matter . . . and not necessarily in the order of occurrence on the conference floor . . . The book is . . . a series of chapters or sections, each one presenting a separate and distinct subject . . . At the rear of the book is a newly compiled bibliography of more than 1,000 books and articles on personnel, classified into 23 different subject headings."

Fearnside, K., and others. Applied atomic energy. 156p. 1951. Temple Press, London, 8s. 6d. (Technical trend series.)

Chemical age, Sept. 15, 1951, p.367. ⅜ col.

"Deals in brief but yet concise form with the application of atomic energy to peaceful purposes . . . Provides the basic knowledge of nuclear physics necessary to an understanding of the advantages to be derived from . . . [new] techniques and it discusses in eleven systematically arranged chapters a large number of applications to different fields of pure and applied science . . . Will be of great interest and value to scientists working in other fields, to the intelligent layman and to the student." *F. N.*

Fisher, Douglas A. Steel serves the nation; the fifty year story of United States Steel. 227p. United States Steel Corp., 71 Broadway, New York, gratis.

Iron & coal trades review, Oct. 26, 1951, p.922. ⅔ col.

"Magnificent both in size and quality of production . . . [the book] summaries [sic] the corporation's outstanding achievements, at the same time drawing attention to their significance in terms of service to the nation . . . Presents a fine record of all aspects of the Corporation's present-day activities. Particularly impressive are the pages devoted to the contributions made by US Steel in times of war . . . Carries scores of photographs and other illustrations, many of which are in colour, and it will no doubt become a permanent work of reference, not only of the corporation's activities, but of the whole United States steel industry." *P. E. C.*

Materials & methods, Nov. 1951, p.150, 152. ⅚ col.

Mines magazine, Oct. 1951, p.163. ⅓ col.

"Contains the 50 year history and growth of the U. S. Steel Corporation, including its operations in mining and manufacturing. It shows how attention to the human element and public relations has contributed to its success . . . The publication of this book is not for wide distribution but can be found for a reference in most public libraries."

Frear, Donald E. H., ed. Agricultural chemistry. v.2: Practical application of agricultural chemistry. 588p. 1951. Van Nostrand, New York, $9.50.

Chemical week, Nov. 3, 1951, p.43. ⅓ col.

"While the first volume of this reference work is concerned with the more fundamental phases of agricultural chemistry, this concluding one deals with the practical applications of the science; and is thus likely to be of greater interest to the practicing agricultural specialist. Written by 23 specialists."

Fertilizer review, Oct.-Dec. 1951, p.15. ⅛ col.

"Edited and authored by recognized specialists in the many phases of agricultural chemistry, this volume should well serve its intended purposes as a text for advanced courses and as a general reference book . . . Divided into five parts: Part I—Chemistry of Major Agricultural Products. Part II—Fertilizers and Soil Amendments. Part III—Nutrition of Farm Animals. Part IV—Pesticides. Part V—Commercial Agricultural Chemistry."

Food engineering, Nov. 1951, p.183. ¼ col.

"Devoted to the practical applications of agricultural chemistry, this advanced reference text should be of use to student, processor and researcher alike . . . Over 20 experts contributed chapters."

Frye, John T. Basic radio course. 176p. 1951. Radcraft, New York, $2.25.

Radio & television news, Nov. 1951, p.117. ⅝ col.

"Truly a basic discussion of the why's and wherefore's of radio . . . Ideal for the student or the tyro technician. Stripped of all technical hocus-pocus, the subject of radio is presented by means of familiar, and sometimes frivolous, analogies. The author has deliberately avoided the mathematical approach to the subject and has rigorously adhered to the practical aspects of the topic . . . We believe our readers will enjoy this little book and profit from its common-sense approach to the servicing of radio receivers."

Radio-electronics, Oct. 1951, p.129. ¼ col.

"Frye, while writing on basic radio fundamentals, does not hesitate to throw in a few hints on servicing the circuits under discussion, drawing on his experience as a service technician. This should make it more readable to the average technician or radio student."

Fulmer, Herman K., & Reynolds, Walter. College algebra. 204p. 1951. Ginn, Boston, $2.85.

School science and mathematics, Nov. 1951, p.676. ½ p.

"This text is planned for a brief course in college algebra which gives a review of the essentials of elementary algebra and carries the student into a discussion of the theory of equations. There is no treatment of statistical measures, permutations and combinations, or probability . . . For any one wishing a short course in college algebra, this book merits consideration. It does give considerable review of earlier work, although as pointed out, it is not as complete in treatment of new topics as some books on the market." *Cecil B. Read.*

Garrigus, Wesley P. Introductory animal science; edited by R. W. Gregory. 503p. 1951. Longmans, New York, $7.70.

Agricultural Institute review, Sept. 1951, p.60. ½ col.

"The author very appropriately states in the preface that his book is intended primarily as a text for the basic course in Animal Husbandry or Animal Science. The material and its arrangement are particularly well suited for that purpose . . . Illustrated with well chosen photographs and should prove of value, particularly in the field for which it was originally intended." *A. R. Ness.*

Gilson, John. A new approach to engineering tolerances. 98p. 1951. Machinery, Brighton, England, 10s. 6d.

Canadian machinery and manufacturing news, Nov. 1951, p.178. ⅔ col.

"Described as a critical presentation of the consideration necessary for the allocation and maintenance of realistic tolerances in modern economic production. As well as necessary reference to the laws of probability and their influence on mating parts, the author provides guidance and information for designers and draftsmen in respect of the normal degree of accuracy obtainable in practice for the more common manufacturing processes."

Machinery (London), Oct. 18, 1951, p.695. ⅜ col.

"Production tolerances must necessarily represent a compromise between conflicting requirements, and cannot fulfil their purpose efficiently unless full account is taken, during their formulation, of the many practical factors involved. The author exposes the fallacies of an oversimplified conventional approach to this important aspect of engineering design, and presents a rational analysis of those practical considerations which are sometimes overlooked or misunderstood . . . Should be read by all concerned with the technicalities of design, production, and assembly of engineering components."

Glascock, Raymond. Labelled atoms. 227p. 1951. Sigma Bks., London, 10s. 6d. (Sigma introductions to science series, no.18.)

Chemical and engineering news, Nov. 19, 1951, p.4987. ⅔ col.

"To be recommended not only to layman interested in acquiring a surer knowledge of what is behind press releases about the beneficial effects of isotopes and atomic energy but also to scientists whose interests lie outside this field and who can spend only a limited time in acquiring familiarity with applied isotopy." *Martin D. Kamen.*

Chemistry in Canada, Nov. 1951, p.15. ⅛ col.

"Interesting and informative reading for a practicing medical man, or anyone with professional scientific training but with a general interest only in the subject of labelled atoms in biology." *L. G. Cook.*

Industrial laboratories, Nov. 1951, p.13. ⅝ col.

"The author did not intend this to be a text book, but rather a description of the use of labelled atoms in the fields of biology and of some of the results which have been obtained. In line with this aim experiments are discussed briefly with emphasis on the biological results obtained, and the principles and techniques of tracer work are barely touched on. The early chapters cover historical material and background physics in very sketchy fashion. The subject matter in these parts does not seem particularly well chosen. Most of the problems and examples given are in the field of

physiology and . . . this would appear to limit the field of interest of this book to practicing physicians who wish a small knowledge of the new techniques and the results which they have given." *Norman J. Bowman.*

Nucleonics, Sept. 1951, p.92. ⅓ col.

"An elementary treatment of the subject of radioactive tracers and some of the instruments used in their connection. Suitable for high-school science majors, college freshmen and sophomores, and others seeking an insight into this science, the text is well illustrated with simple sketches, autoradiographs, and the like."

Glass, Bentley. See **Winchester, Albert M.**

Gregory, R. W. See **Garrigus, Wesley P.**

Griffin, Carroll W., & Plunkett, M. A. Inorganic semimicro qualitative analysis. 299p. 1951. Blakiston, Philadelphia, $4.75.

Analytical chemistry, Oct. 1951, p.1524. ⅓ col.

"Divided into two parts, theory and analysis. More than one half of the book is taken up with the theoretical treatment of such subjects as atomic structure, solutions of electrolytes, chemical equilibrium, hydrolysis, complex ions, amphoterism, and oxidation and reduction . . . The second section . . . deals with the practical laboratory techniques for the preparation of samples for semi-microanalysis, such as equipment, manipulations, solution of sample, etc. The remainder of this part follows the group scheme for the cations and a short treatment of anion analysis." *T. D. Parks.*

Hägglund, Erik. Chemistry of wood. 631p. 1951. Academic Press, New York, $13.50.

Chemical and engineering news, Nov. 5, 1951, p.4773. ⅔ col.

"Prof. Hägglund has added another significant contribution that should be welcomed by all students, technologists, and research workers in the field of wood chemistry . . . As with any monograph covering a wide field, certain items are missing . . . However, there are nearly 2000 references, some of them to articles published in 1950." *Louis E. Wise.*

Chemical week, Sept. 29, 1951, p.46. ¼ col.

"Covered here is the chemistry of cellulose, lignin and accessory constituents in addition to a brief discussion of morphology and physiology. Also treated are processes of wood utilization such as wood saccharification, sulfite, semi-chemical pulping, etc."

Hartzell, Karl D. Opportunities in atomic energy. 144p. 1951. Grosset, New York, $1. (Vocational guidance manual.)

Nucleonics, Aug. 1951, p.67. 1¼ col.

"The author . . . is to be complimented on his up-to-date statistics and sensible evaluation of future trends in the field . . . This manual is more than worth its price to anyone considering a career in the atomic-energy field." *E. P.*

Hegner, Robert W., & Stiles, K. A. College zoology. Ed.6. 911p. 1951. Macmillan, New York, $6.

School science and mathematics, Nov. 1951, p.671. ½ p.

"Much of the text has been rewritten to bring it up-to-date, and there has been rewording to clarify the complexity of certain former explanations. There are more than three hundred new illustrations . . . All of these illustrations are integrated with the text material, which has increased emphasis in ecology, geographical distribution, natural history, parasitology, human physiology and diseases, and economic zoology. The representative animal is the cat. There are adequate references at the end of each chapter, and the glossary has been greatly expanded." *George S. Fichter.*

Herrmann, Günther, & Wagener, Siegfried. Oxide-coated cathode. v.2: Physics. 311p. 1951. Chapman & H., London, 42s. net.

Electrician, Sept. 28, 1951, p.958. ½ col.

"Based on an English edition of a German publication, with many additional data . . . In preparing the work the authors have included a discussion of the fundamentals and phenomena of electrical conduction and diffusion of solids as applicable to the oxide-coated cathode, and more than half the book is devoted to their study. Mention is made of every work on oxide cathodes which had been published up to the beginning of 1950, making thereby, the book the most comprehensive of its type."

Howe, Harold Bartlett. Descriptive geometry; a pictorial approach. 332p. 1951. Ronald, New York, $4.

American machinist, Nov. 12, 1951, p.258, 260. ⅝ col.

"By using more than 398 illustrations, Mr. Howe has made clear an often difficult subject. A direct-method approach is used instead of the earlier plane-trace method. The substitution of sketches for textual explanation requires the student to express his space conceptions in picture form. The result is a better grasp of the fundamentals in a shorter time."

Modern machine shop, Nov. 1951, p.328, 330. 1 col.

"Designed for use in undergraduate courses, this textbook employs the direct-method approach instead of the earlier plane-trace method. This procedure is said to make the theory of the subject more interesting and to enable the student to master the content more readily."

Ingham, H. S., & Shepard, A. P. Metallizing handbook. Ed.5. 249p. 1951. Metallizing Engineering Co., Inc., Long Island City, N. Y., $3.

Factory management and maintenance, Nov. 1951, p.294. 12 l.

"Long on know-how and practical tips is this detailed study of metallized coatings . . . Covers the entire field of metal spraying—preparation, application, ventilation, and safety."

Plant engineering, Nov. 1951, p.106. ¼ col.

"Almost 20 years of experience in the design, manufacturing and use of metallizing equipment has contributed to this handbook . . . Covers various methods of preparation prior to metallizing. The application of metallized coatings for machine element work and for many special production jobs are discussed separately. A section is devoted to engineering data relating to the metallizing process. Ventilation for blasting and metallizing, and safety measures are topics offered to round out the knowledge of this particular process."

Steel equipment & maintenance news, Oct. 1951, p.42. ⅓ col.

"[The authors] bring to the engineers all standard metallizing practices and developments to date of printing. Their purpose is twofold: (First) to provide information for recommending and specifying metallizing jobs, and (Second) to describe the techniques for actually carrying out the work. The application of metallized castings for machine element work, for corrosion work and for various production jobs are discussed. Such supplementary information as metallizing engineering data, ventilation procedures, and safety precautions are also included. No book of this scope or type has yet been published in the U. S."

Jacob, L. Introduction to electron optics. 150p. 1951. Methuen, London, 8s. 6d. (Wiley, New York, $2.) (Methuen's monographs on physical subjects.)

Analytical chemistry, Sept. 1951, p.1341. ⅛ col.

"The appearance of this book is deceiving because, although it is small in size, it is large in scope and very well written. By a similar token the title is somewhat modest, in that the contents of the book comprise more than an introduction. In fact, the full benefits of the text will not be readily comprehended by a neophyte in the field of electron optics . . . Future readers of this book will gain confidence in its contents primarily because the author's knowledge and authority have been presented with finality." *F. A. Hamm.*

Journal of the Franklin Institute, Oct. 1951, p.364. ½ p. including another review.

"Jacob has chosen to give merely brief statements with literature references. The result is hardly more than a bibliographic list. Throughout the reader is required to have a considerable background in electromagnetic theory, mathematical techniques, and in 'optical' optics. As an introduction to the subject the more expansive tests [sic] of Cosslett, Pierce, or Zworykin, Heller *et al.,* are to be preferred." *Alan C. Byers.*

Proceedings of the I.R.E., Nov. 1951, p.1471. ½ col.

"The title . . . is a little misleading. It constitutes rather, a summary of a very small considerable fraction of existing electron-optical literature. The beginner would have difficulty in discriminating between the more important and the less important techniques and findings of electron optics as they are reported here. Some of the general laws of electron optics are not brought out clearly and, too frequently, the logical basis of mathematical developments is not indicated, and symbols are inadequately defined. Nevertheless, the worker in the field of electron optics will appreciate the many references to papers which may, heretofore, have escaped his notice . . . The remarkable amount of material which has been compressed into this small volume appears to be relatively free of errors." *Edward G. Ramberg.*

Science progress, Oct. 1951, p.729. 1 col.

"The historical introduction is so shortened as to be of little value to anyone new to the field, and the theoretical chapters which follow are over-compressed and somewhat disjointed. On the other hand, more adequate space is accorded the exposition of the properties of practical electron lenses in the latter half of the book. This section assembles a great deal of useful information, much of which is due to the author's own investigations. It gives a good picture of how electron lenses behave and of what can, and cannot, be done with them. The book is therefore to be recommended to those who are primarily interested in this practical aspect of the subject." *V. E. Cosslett.*

Juran, J. M., ed. Quality-control handbook. 800p. 1951. McGraw, New York, $10.

Chemical week, Sept. 29, 1951, p.46. ¼ col.

"Designed primarily for executives, supervisors, and engineers in industry, this volume focuses attention on the principles and practices involved in achieving better quality at lower cost . . . Written as a manual for planning or carrying out a quality-control program."

Factory management and maintenance, Nov. 1951, p.292. ¼ col.

"This first handbook in the field of quality control brings you all the known principles and practices in one ready reference. It's a complete survey of all phases of quality control (not just statistical) compiled by specialists."

Modern machine shop, Nov. 1951, p.326. ⅜ col.

"The entire quality control function in industry is realistically treated in this handbook. Formulas, data, record forms—all tools of proven value for assuring effective production—have been included by the specialists who contributed material."

Plant engineering, Nov. 1951, p.106. ¼ col.

"Presents quality control examples from actual cases and records . . . Designed primarily for reference and use by executives, supervisors and engineers in industry."

Textile world, Nov. 1951, p.250. ⅛ col.

"Will serve as a manual and easy reference to those know-how principles that every manager should keep in mind . . . The work of several specialists; illustrative examples from actual cases and records are profuse."

Kelly, Burnham. Prefabrication of houses; a study by the Albert Farwell Bemis Foundation of the prefabrication industry in the United States. 466p. 1951. Technology Press, Massachusetts Inst. of Technology, Cambridge, Mass., and Wiley, New York, $7.50.

Commonwealth engineer, Aug. 1, 1951, p.26. 1 col.

"In its scope the book is broad. It commences with a story of the development of the prefabricated house industry in U.S.A. before 1900 and then in the following periods—1900 to 1920; 1920 to 1930; 1930 to 1940; 1940 to 1945 and 1946 to 1949 . . . The next 40 pages . . . are devoted to the future of prefabrication, with a detailed consideration of current trends and future problems . . . Part 2 . . . is concerned with management of the prefabricators, design of the houses, procurement of the materials, and marketing of the houses. These subjects, being technical will appeal to the engineer, the architect and the builder . . . Worthy of close reading by all interested in solving the housing problem."

Mechanical engineering, Oct. 1951, p.842. 1½ col.

"Writers of books on industrial subjects of the monographic type . . . will do well to take notice of this book, especially of the style of

writing used by the author and the thoroughness in the coverage of the entire subject matter. The style avoids too-technical language, offers some, but not too many figures, and thus presents the entire subject in what may be called a 'layman's style,' which may or may not become popular with the readers. The reader of this book undeniably obtains an insight into the beginnings, trials, and tribulations of a new industry, which otherwise he could obtain only through many years of contact or research." *Edward H. Hempel.*

Kortüm, Gustav, & Bockris, J. O'M. Textbook of electrochemistry. v.1. 351p. 1951. Elsevier, New York, $7.

Chemical week, Oct. 27, 1951, p.38. ⅓ col.

"This volume restricts itself to the fundamentals of modern electrochemistry rather than over-all details. Particular stress is placed on physical and thermodynamic principles in order to cover the field as comprehensively as possible . . . Recent advances have been noted and the bibliographies appearing at the end of the various sections have been extended to include work done in the English language."

Electroplating, Sept. 1951, p.276. ½ col.

"By this English edition of Kortum's Lehrbuch der Elektrochemie, it is hoped to make available to a large group of physical chemists a solid and comprehensive summary of modern electrochemistry, of use not only to those engaged in study and research in the chemistry of ions but also to many who use electrochemical methods as a research tool . . . Although based on the German work, about half the material in this book is new. A new chapter on Experimental Technique has been added."

Industrial chemist, Oct. 1951, p.472. 1⅝ col.

"This volume by itself would serve as a valuable introductory textbook for undergraduates or others who wants [sic] a comprehensive survey of the subject without involving themselves in details or difficulties. For this purpose the book is probably better than any other which is readily obtainable in this country, and it seems likely that Volume 1 may achieve popularity with those who do not need (or cannot afford) Volume 2. This is an added reason for providing Volume 1 with an index." *P. V. Dankwerts.*

Krantz, John C., jr., & Carr, C. J. Pharmacologic principles of medical practice. Ed.2. 1116p. 1951. Williams & Wilkins, Baltimore, $10.

Drug & cosmetic industry, Oct. 1951, p.532. ⅓ col.

"The central purpose of the second edition . . . is identical with that of the first edition, namely, to present the pharmacodynamic and pharmacotherapeutic actions of drugs as they are used in the treatment and cure of disease."

Journal of the American Pharmaceutical Association, scientific edition, Oct. 1951, p.533. ⅞ col.

"This splendid text is as up-to-date as the latest pertinent literature at the time the manuscript went to press. The same readable style that characterized the first edition is retained, and much new information is available in the authors' clear and concise presentation."

Lambe, Thomas William. Soil testing for engineers. 165p. 1951. Wiley, New York, $5.

Agricultural engineering, Nov. 1951, p.626. 10 l.

"A text and reference on the subject covering specific gravity test, Atterberg limits and indices, grain size analysis, compaction test, permeability test, capillary head test, capillary permeability test, consolidation test, direct shear test on cohesionless soil, triaxial compression test on cohesionless soil, unconfined compression test, and direct shear test on cohesive soil. Nomenclature and symbols follow the ASAE recommendations for soil mechanics nomenclature. Appendices cover conversion factors, specific gravity of water, viscosity of water, proving rings, drawing of liquid limit device, and derivation of equations."

Contractors and engineers monthly, Oct. 1951, p.53. ½ col.

"Though written primarily as a text-book for teaching soil-testing methods and laboratory practice, 'Soil Testing for Engineers' is a valuable reference handbook for practicing engineers and soils-lab personnel . . . The chapters are carefully organized and provide subsections on apparatus and supplies, recommended procedures, calculations, results, and numerical examples for each of the tests."

Journal of the Franklin Institute, Nov. 1951, p.443. ⅝ p.

"While several books on the theory and practice of soil mechanics have appeared in recent years, none has been exclusively concerned with the methods of soil testing. 'Soil Testing for Engineers' . . . fulfills this gap in the literature and provides a ready reference for the common tests used in soil mechanics . . . Although short and concise . . . [it] contains an unusually complete description of the various soil mechanics tests . . . Should prove a very useful manual for the student or practicing engineer." *E. W. Hammer, jr.*

Mining engineering, Nov. 1951, p.952. ¼ col.

"Filling a need for a text for the teaching of soil testing in the laboratory, this book is also of value as a reference for practicing engineers and for personnel in soil laboratories."

Soil science, Nov. 1951, p.406. 11 l.

"Soil physicists and physical chemists will find this an excellent reference volume."

Leach, H. W., & Beakley, G. C. Elementary problems in engineering. 269p. 1951. Macmillan, New York, $3.50.

Product engineering, Oct. 1951, p.286. ⅜ col.

"Written for use in engineering problems courses. All problems and explanations are based on the assumption that most problems courses are offered in the freshman year. Subject matter and problems have been selected with the thought of helping students adapt themselves to college work and also to assist in the transition from high school to the college engineering level."

Lent, Deane. Machine drawing. 523p. Prentice-Hall, New York, $7.75.

Canadian machinery and manufacturing news, Oct. 1951, p.251. 1¼ col.

"The things that a student may ultimately get out of studying this book are probably about the same as he might from any other completely comprehensive text that was as modern. However, the way in which he would acquire his knowledge is one of the outstanding

features of Machine Drawing. The author's method . . . is to lay down a program of designing a given machine and carry it through all phases of design, shape description, technical sketching, detail drawings and assembly drawings, relating each to the practical problems of manufacture, and bringing in collateral information on the way."

McGinnis, R. A., ed. Beet sugar technology. 574p. 1951. Reinhold, New York, $10.

Agricultural chemicals, Nov. 1951, p.61. ¼ col.

"Covers the beet sugar industry from growing of the beets to purification and crystallization of the sugar. While mainly concerned with production of beet sugar in the factory, a chapter of the book covers the growing of sugar beets in the field. There are short discussions of pre-emergence weed treatment and late emergence weeds by chemicals, application of fertilizers and control of insects and diseases."

Chemical engineering progress, Oct. 1951, p.30. 1 col.

"A creditable presentation of the varied aspects of beet sugar technology and constitutes an important addition to the chemical engineering literature in a field of endeavor vital to the economy of the United States . . . Addressed to three groups of readers: namely, to the beet sugar factory technicians for instructional and reference purposes; to the beet sugar growers and others connected with or interested in the industry for general information, and to professional engineers, chemists, and technological college students as a reference manual . . . This is the first comprehensive book in English on the manufacture of beet sugar in 44 years and is recommended as a general reference work to anyone associated with the industry in an administrative, operational or technical capacity." *Erman A. Pearson.*

Food engineering, Nov. 1951, p.183. ¼ col.

"Over 30 contributors have cooperated in preparing this story on the sugar beet. Emphasis has been placed on the many chemical engineering aspects in the manufacture of sugar from this source. The following unit operations are described in detail, with accompanying tables, pictures, and graphs: Extraction by diffusion, chemical purification, evaporation, crystallization, and drying. The agronomy and quality control phases in the manufacture of beet-sugar and its byproducts are also presented in this comprehensive reference."

McIlroy, R. J. The plant glycosides. 138p. 1951. E. Arnold, London, 18s.

Chemical age, Oct. 13, 1951, p.503. 1 col.

"In the preface . . . the author disclaims any more ambitious intent than that of providing an up-to-date summary of the subject 'for convenient reference' . . . His appendix brings his references and summaries up-to-date as far as October, 1950." *F. N. M.*

Maxwell, E. A. General homogeneous coordinates in space of three dimensions. 169p. 1950. Cambridge Univ. Press, London, $2.75.

Mathematical reviews, Oct. 1951, p.731. 1 col.

"A sequel to the same author's 'The Methods of Plane Projective Geometry Based on the Use of General Homogeneous Coordinates' . . . Throughout . . . many simple corollaries are indicated without proof, under the name of theorem-examples. In addition there are impressive collections of examples at the end of each chapter, largely taken from Cambridge and London examinations, which are by no means trivial." *P. Du Val.*

Mercer, L. Boyd. Law of grading for concrete aggregates. 113p. Melbourne Technical College Press, Melbourne, 5s.

Commonwealth engineer, Sept. 1, 1951, p.70. 1 col.

"The text . . . embraces two papers by the author—one presented at the recent Brisbane conference of The Institution of Engineers Australia and the other at the congress of the Australian and New Zealand Association for Advancement of Science, held in Brisbane in May, 1951 . . . Welcomed as an important contribution to the literature on concrete; it will be studied by all users of concrete with benefit and will appeal to lecturers at universities and technical colleges."

Miller, Henry A. Electronic applications. 110p. 1951. E. & F. N. Spon, London, 18s. (Electrical engineering series.)

Electrical news and engineering, Aug. 15, 1951, p.72, 74. ¼ col.

"This volume, describing, with the help of carefully selected diagrams and photographs, a wide range of present day applications of electronics, has been specially written for the use of engineers and of technicians concerned with, or interested in, modern scientific and industrial development. The treatment is necessarily brief."

Electrical review, Oct. 19, 1951, p.796. ½ col.

"The author . . . says the book is intended for '. . . students, engineers, and everyone concerned with and interested in modern scientific and industrial development.' The book is, in fact, suitable only for those who have some understanding of electrical theory but no knowledge whatever of the particular electronic devices described. There is no mathematics . . . Cannot be recommended to anyone requiring more than a most superficial treatment." *V. J. F.*

Miller, Robert F. E. The amateur's microscope. 136p. 1951. P. Marshall, London, 7s. 6d.

Mechanics, Oct. 5, 1951, p.478. ¼ col.

"This is the book for the newcomer, for the person who has recently acquired a microscope or intends to do so. Beginning with a brief early history, the author goes on to describe the various types of the modern instrument, and finally there is an appendix dealing with the Electron Microscope."

Millman, Jacob, & Seely, Samuel. Electronics. Ed.2. 598p. 1951. McGraw, New York, $7.25.

Electrical manufacturing, Sept. 1951, p.216, 218. ⅓ col.

"Emphasis in this clearly written second edition is on physical fundamentals, introduction to commercial tubes and analysis of these tubes as circuit elements."

Electrical world, Nov. 5, 1951, p.198. 12 l.

"The first edition . . . was distinctive in that the authors strove to knit together the electronic engineering and the electronic physics for better grasp of electronic functioning. This

unique objective has been retained even though extensive changes have been effected to bring in newest theory and fresher material on cathode-ray tubes, cyclotrons, klystrons, and a rearrangement of the subject matter on polyphase rectifiers for power applications."

Radio & television news, Dec. 1951, p.152. ⅜ col.

"While some portions of the book have merely been brought-up-to-date, other chapters have been completely reworked to enhance the book's value as a teaching tool . . . The authors have assumed that users . . . will be familiar with calculus and elementary differential equations. A working knowledge of the basic principles of a.c. theory, including elementary Fourier analysis is essential."

Mitchell, J. W., ed. Fundamental mechanisms of photographic sensitivity. 347p. 1951. Academic Press, New York, $9.50.

Chemical and engineering news, Oct. 29, 1951, p.4626. ½ col.

"Made up of 48 papers which were presented at an international conference held at the University of Bristol in March, 1950 . . . Will be of more interest to the specialist than to the general reader, since most of the papers aim specifically at presenting the results of the authors' research on the particular problems. A few papers are of more general scope and present an integrated picture of the present state of knowledge in the fields of optical sensitization, chemical sensitization, and the use of photographic emulsions in the investigation of problems in nuclear physics and cosmic rays . . . Well illustrated." *T. H. James.*

Mommaerts, W. F. H. M. Muscular contraction; a topic in molecular physiology. 201p. 1950. Interscience Publishers, New York, $5.

Science progress, Oct. 1951, p.762. ¾ p.

"To guide the reader towards the ultimate explanation of contraction, this book certainly represents the most balanced exposition of the old and the new yet available." *Kenneth Bailey.*

Moncrieff, R. W. The chemical senses. Ed.2, revised and enlarged. 538p. 1951. L. Hill, London, 21s. 9d.

Manufacturing chemist, Oct. 1951, p.410. 1⅛ col.

"Offers the most up-to-date and systematic collection of data covering those animal senses which are characterised by chemical stimulation. Throughout, the author has drawn extensively from previously published works, and detailed references are given in the actual text . . . He has succeeded in creating, from a mass of complex technical data, a very readable book for those wishing to extend their knowledge of this fascinating subject, and a highly efficient reference book for the busy researcher. One feature . . . which . . . deserves particular commendation is the inclusion of a most useful glossary and excellent author and subject indexes." *G. Kempson-Jones.*

Perfumery and essential oil record, Oct. 1951, p.352. 2⅛ col.

"The book stands out on its own as the only one on the subject; it will stimulate thought and discussion and the author has rendered a notable service in presenting a catholic view of the intriguing subject of Odour and Taste." *L. M. A.*

Monypenny, John H. G. Stainless iron and steel. Ed.3, revised. 2v. v.1: Stainless steels in industry. 524p. 1951. Chapman & H., London, 45s. net.

British steelmaker, Sept. 1951, p.478. 1¼ col.

"Written from the standpoint of the industrial user of stainless steels, and accordingly, the first chapter is devoted to descriptions of the various stainless steels in commercial use, their compositions, characteristic features, and properties of importance to the engineer and metal worker. Subsequent chapters are concerned with the fabrication of stainless steels, their powers of resistance to corrosion and behaviour at high temperatures. A final chapter discusses the selection of stainless steels for industrial purposes. The metallography of the steels has been reserved for the second volume, entitled *Microstructure and Constitution.*"

Morley, A. W. Performance of the piston type aero-engine. 143p. 1951. Pitman, London, 25s. net.

Aeronautical engineering review, Oct. 1951, p.106. ⅝ col.

"Devoted primarily to an analysis of the effects of variations in atmospheric pressure and temperature and of supercharging on the power output of an aircraft engine . . . Will be of interest primarily to people concerned with the prediction of the effect of altitude on the performance of reciprocating aircraft engines. The author's style is easy, and the mathematics included is elementary." *Edward S. Taylor.*

Journal of the Royal Aeronautical Society, Sept. 1951, p.592. ¾ p.

"The book is a small one—it contains eight fairly short chapters—but is packed full of 'meat,' with . . . not one superfluous word. Indeed on occasion, we felt that the author might have so far relaxed the austerity of his style to have enlarged a little on the more difficult or doubtful points. The book however is not intended for the general student—although he may study it with considerable advantage—but rather for the engine performance specialist and the budding project engineer to whom it must prove an invaluable reference . . . Dr. Morley is to be congratulated on a most valuable little book."

Moses, Graham Lee. Electrical insulation; its application to shipboard electrical equipment. 259p. 1951. McGraw, New York, $5.50.

Electrical times, Oct. 11, 1951, p.660. ⅛ col.

"Deals exclusively with American practice. Since trends in shipboard electrical equipment —higher temperatures, increased reliability, lighter weight, etc., are similar on both sides of the Atlantic, the book should be of considerable interest to British engineers."

Organic reactions; edited by Roger Adams. v.6. 517p. 1951. Wiley, New York, $8.

Industrial laboratories, Nov. 1951, p.13. 1 col.

"The excellent format and arrangement of the previous volumes have been retained. It continues the high standard of content and usability previously set. Each chapter contains a table of contents for ready references, discussion of the nature and scope of the reaction,

factors influencing the reaction, general experimental conditions, a few representative syntheses given quite specifically, tables of data on compounds synthesized by the reaction and a bibliography. Emphasis is on completeness of coverage in the tables and bibliography, which greatly enhances usefulness . . . This latest number of the series, though of more limited interest than some of the earlier volumes, is certain to be a valuable reference work in the library of the organic chemist." *Norman J. Bowman.*

Journal of the American Chemical Society, Nov. 1951, p.5517. ¼ col.

"Maintains the high standards of the previous volumes. The several chapters have been contributed for the most part by authorities whose personal experience and knowledge of the reactions discussed are extensive. The reactions selected for inclusion in this volume have at least as great utility and generality as those of previous volumes, and Dr. Adams and his Board are to be congratulated for another splendid contribution to the permanent literature of organic chemistry." *Marshall Gates.*

Packer, Harry Q., & Waterman, M. E. Basic retailing. 387p. 1951. Prentice-Hall, New York, $2.25.

Journal of retailing, Fall 1951, p.154. ½ col.

"The authors have done an excellent job of collecting, selecting, and evaluating material and putting it together in a well-written text designed for the high-school student. They are to be commended for the superior manner in which they have handled a stereotyped subject." *T. Dart Ellsworth.*

Parker, Willard E., & Kleemeier, R. W. Human relations in supervision. 472p. 1951. McGraw, New York, $4.50.

Chemical week, Nov. 17, 1951, p.50. ¼ col.

"Directed to the first-line supervisor—whether foreman or office manager—this volume is concerned with the human factor in business and industry . . . Presents modern management principles and goes on to treat the best practices in hiring, inducting, evaluating and counseling the worker, with stress placed on nondirective counseling as a valuable tool to the supervisor when handled effectively. Discussion questions follow each chapter."

Peck, Lyman C. Elements of algebra. 230p. 1950. McGraw, New York, $2.75.

School science and mathematics, Oct. 1951, p.592. ¾ p.

" 'Written primarily for college students who have had no algebra in high school and thus presupposes no mathematical background other than ordinary arithmetic'." *A. N. Tucker.*

Peterson, Roger Tory. Field guide to western birds. Ed.2. 240p. 1951. Houghton, Boston, $3.50.

Nature magazine, Nov. 1951, p.495. ¼ col.

"A great deal has been added to the original edition, the text has been rewritten, more information on ranges and songs included. Thus this new edition makes the book the standard for field work in the West. There are six pages in full color, forty-eight line cuts and forty pages of half-tone illustrations. This book and binoculars are complementary, one to the other, on any bird-seeking trip afield."

Phillips, H. B. Differential equations. Ed.3, revised. 149p. 1951. Wiley, New York, $3.

School science and mathematics, Nov. 1951, p.674. ¼ p.

"The publishers point out that . . . problem lists have been expanded, some sections have been rewritten, and additional illustrative examples are avoided. This would be classified as a somewhat standard text for a first course in ordinary differential equations, with emphasis on applications rather than theory although this does not mean that all theory is neglected . . . There is an adequate supply of problems, with answers furnished to essentially all exercises. This text should by all means be considered when a new adoption is taking place and where the course tends to emphasize practical viewpoint as contrasted to the theoretical." *Cecil B. Read.*

Phillips, Reginald S. Electric lifts. Ed.3. 358p. 1951. Pitman, London, 50s. net.

Electrician, Aug. 17, 1951, p.484. ⅓ col.

"The book obviously supplies a need in the field of current practice in the design, installation, working and maintenance of lifts. Since the last printing, several chapters have been considerably amplified . . . Several of the older illustrations have been replaced by ones showing newer equipment."

Potter, Mary, and others. Mathematics to use. 441p. 1950. Ginn, Boston.

School science and mathematics, Oct. 1951, p.591. ½ p.

"The subject matter is presented in a very 'readable,' simple and interesting manner . . . Since the book is designed for those with no intention of continuing their education in college, the authors have wisely stressed the correct usage of arithmetic with very fine explanations and drill work on fractions, decimals and percentages." *G. B. Reeve.*

Pumphrey, Fred H. Fundamentals of electrical engineering. 668p. 1951. Prentice-Hall, New York, $5.75.

Electrical news and engineering, Sept. 15, 1951, p.90. ⅓ col.

"Intended as a university level text for engineering students in fields allied to electrical engineering. With that in mind, the author has done extremely good work in condensing the vast field covered in this book, without sacrificing a good deal of the useful detail . . . Copiously illustrated with photographs and diagrams."

Journal of the Franklin Institute, Nov. 1951, p.444. 9 l.

"Deals with the fundamentals of electrical engineering and their application in practice . . . Intended as a text for students who are specializing in fields other than electrical engineering." *S. Charp.*

Pyenson, Louis. Elements of plant protection. 538p. Wiley, New York, $4.96.

Chemical week, Nov. 17, 1951, p.50. ⅓ col.

"A study of plant pests—insects, disease-producing organisms, rodents, birds and weeds—and their control is the subject of this volume. Concerned with the nature of plant pests, the author discusses the structure and development of injurious insects, the characteristics of mammals and birds, the causes of plant diseases, and

the extent of weed damage . . . There is a practical explanation of the modern means for combating damage of this type . . . The author also describes equipment used for plant protection, with reference to their proper selection and maintenance."

Richdale, L. E. Sexual behavior in penguins. 316p. 1951. Univ. of Kansas Press, Lawrence, Kan., $5.

Auk, Oct. 1951, p.531. 2¾ p.

"Deals with the relations between members of the same or opposite sexes that involve actions of both aggressive and 'love-habit' nature. The study was carried over ten seasons, 1936 to 1946, of intensive field work on the Otago Peninsula in New Zealand. Special attention is given to the Yellow-eyed Penguin . . . but reference is also paid to corresponding behavior in other penguins and in other birds so that the discussions of concepts have general application . . . Not only a thorough treatise of sexual behavior in one species, but also a useful summary for penguins as a group and a fundamental discussion applicable to birds in general with which any student of this phase of ornitholgy [sic] needs to be familiar . . . Recommended to the attention of all." *S. Charles Kendeigh.*

Natural history, Oct. 1951, p.343, 384. 1 col.

"Comprises ten chapters, appendices concerning specifically identified and banded birds, a bibliography, and an analytical index. The photographic illustrations are not only of the highest standard but are also all pertinent to the scientific discussion . . . A notable and original ornithological contribution. Whatever is written on penguins hereafter will have to take its base line from this source. There is perhaps no paper in the history of science that has involved such continuous, intimate, and long-term recording of the behavior of a wild animal." *R. C. M.*

Scientific monthly, Sept. 1951, p.202. 1⅓ col.

"Packs within its covers a most remarkable amount of accurate, critical, and new observations on a highly interesting group of birds." *Herbert Friedmann.*

Ritchie, William E. Production and inventory control. 278p. 1951. Ronald, New York, $5.

Factory management and maintenance, Nov. 1951, p.292. ⅓ col.

"Brings into focus the problems of production planning, production control, and inventory control. It covers the relationship between these three functions, their major points of contact, and the type of data exchanged . . . The author backs up his theory with case examples of 12 practical control systems."

Roche, John M. Safety and the foreman. 197p. 1951. National Foremen's Inst., New London, Conn., $3.

National safety news, Nov. 1951, p.72. ¾ col.

"An excellent summary of industrial safety and its meaning to the supervisory staff . . . The book is frankly a brief treatment of a large subject. However the book's very limitations may be thought of as assets, particularly for the foreman reader who wants to get the fundamentals of safety in quick form . . . Fluent and readable without being flippantly vernacular, yet it succeeds in getting quickly to the heart of the topic at hand . . . Reflects the author's lifelong familiarity with problems of safety philosophy, safety administration, and safety engineering. It is probably as brilliantly written and compact a treatment of the subject as can be found in any comparable number of pages." *Kent W. Francis.*

Rogers, T. S. Design of insulated buildings for various climates. 119p. 1951. Architectural Record, 119 W. 40th St., New York, $5.50.

Heating and ventilating, Oct. 1951, p.128. ⅔ col.

"The presentation of useful technical information in a non-technical manner was achieved by T. S. Rogers in his book . . . Divided into two parts—the first covering principles and the second practice . . . The author, who has succeeded in making his subject most interesting, is director of technical publications for Owens-Corning Fiberglas Corp., and has devoted 30 years to the interpretation of technical facts to practical people."

Rosskopf, Myron F., and others. Mathematics; a first course. 472p. 1951. McGraw, New York, $2.60.

School science and mathematics, Nov. 1951, p.673. ¾ p.

"Covers essentially all of the material in a first year algebra course. In addition there is selected material from the fields of geometry; statistics, personal, government, and business finance; elementary trigonometry. There is special emphasis on applications . . . Contains an extremely large number of problems . . . This is not a book designed for the student who in the opinion of the school cannot master a traditional course in algebra or geometry. The teacher seeking a sound text, covering a broad field, would do well to examine this book with care." *Cecil B. Read.*

Rowan, Joseph R., & Blankertz, D. F. Profitable retail advertising. 285p. 1951. Ronald, New York, $4.

Journal of retailing, Fall 1951, p.155. ⅓ col.

"A well-written text that presents the essentials of retail advertising and sales promotion of value to college students planning careers in the advertising and retail fields . . . Subject material is divided into four main parts: 'Before You Advertise or A Plan of Attack'; 'When You Advertise or A Choice of Methods'; 'How to Advertise or A Work of Art and Science'; and 'After You Advertise or A Dollar Through.' Its chief appeal are its brevity and clarity of presentation." *T. Dart Ellsworth.*

Russell, William L. Principles of petroleum geology. 507p. 1951. McGraw, New York, $7.

Economic geology, Nov. 1951, p.787. ⅝ p.

"Both a textbook and general reference on the subject. It gives discussions of principles, methods, and techniques and omits long detailed descriptions of oil fields and their stratigraphy. In addition to the customary treatment of origin, accumulation of oil, and various oil traps, it emphasizes geophysics and, as would be expected from the author's work, well logging methods and their interpretation. The gamma

ray and neutron well logging is given for the first time . . . Emphasizes the practical application of principles and characteristics of oil and gas fields that would aid in their discovery are pointed out . . . This volume will probably prove to be the most widely used of all textbooks on petroleum geology."

Mines magazine, Sept. 1951, p.41. ¼ col.

"Gives a discussion of the principles, methods and techniques important in petroleum geology . . . Illustrations throughout the book help to clarify questions that may come to the reader's mind. Important examples are used giving practical applications of the principles described. Recent advances in geophysics and well logging are well covered including the Gamma Ray and Neutron well logs . . . Should prove to be a valuable addition to every petroleum geologist's library."

Sampson, Henry, ed. World railways, 1950-1951. 620p. 1951. Low, London, £3 3s. net.

Engineer, Aug. 17, 1951, p.214. ⅘ col.

"Fills a long-felt want in the literature on railways, for it provides under one cover a mass of information on the methods, operation and equipment used on the many and varied systems throughout the world . . . Compiled upon information supplied by railway authorities and equipment manufacturers in all parts of the world . . . All interested in railways will look forward to succeeding volumes of what is undoubtedly the finest general work of reference on the world's railways."

Railway age, Oct. 29, 1951, p.47. 1⅓ col.

"Basically well organized, and is as easy to read as it is hard to put aside. Its representation of the British Railways is exceptionally complete but the railroads on the continent—at least outside the iron curtain—are well represented too . . . The wealth of material contained . . . should please both the professional railroad man and the amateur hobbyist. It should be a coveted addition to the library and a useful reference work."

Siu, Ralph G. H. Microbial decomposition of cellulose. 531p. 1951. Reinhold, New York, $10.

Chemical week, Oct. 27, 1951, p.38. ⅓ col.

"Placing the emphasis on cotton, the purest natural form of cellulose, the author has written an interpretive monograph on the fundamental phenomenon of microbiological degradation of celluose. Data has [sic] been taken from military and governmental laboratories and reports compiled during and since World War II in order to present the basic facts on the decay of cellulose products by bacteria, fungi and mildew."

Soap and sanitary chemicals, Nov. 1951, p.81, 83. ¼ col.

"Contains 12 chapters divided into five main sections: Introduction, structure and properties of cotton fibers, causal organisms, mechanism of degradation and methods of prevention."

Textile world, Nov. 1951, p.248. ⅓ col.

"A comprehensive collection of data dealing with fungus, bacteria, and mildew attacks on cotton fabrics . . . Included in the text are heretofore unpublished data from military and other governmental laboratories, as well as previously inaccessible reports of field operations during and since World War II."

Smith, Kenneth M. Recent advances in the study of plant viruses. Ed.2, rewritten. 300p. 1951. Churchill, London, 22s. 6d. net.

Annals of applied biology, Sept. 1951, p.735. ½ p.

"The author . . . has produced an entirely new book for the second edition. The title is now misleading and inadequate, because the book does not deal only with recent work. It is a valuable account of the development of knowledge on plant viruses and virus diseases and, indeed, is least satisfactory when the most recent advances are being described . . . The fifty-one illustrations have been carefully chosen and are well reproduced. There is a subject and an author index, and the Bibliography is more than adequate. The book, despite some shortcomings and ambiguous phraseology, provides a valuable introduction to the study of plant viruses." *F. C. Bawden.*

Science progress, Oct. 1951, p.753. 1⅙ p.

"This book, together with its predecessor (for they are to a considerable extent complementary), covers the whole field in a clear and succinct manner, and will be welcomed, not only by those specially concerned in virus research, but also by a large group of biological students who are interested in having an up-to-date picture of this fascinating and rapidly evolving science." *W. Brown.*

Smoluchowski, R., and others, ed. Phase transformations in solids. 660p. 1951. Wiley, New York, $9.50.

Chemical week, Oct. 6, 1951, p.40. ¼ col.

"Consisting of various papers presented at the Cornell Symposium plus the discussion of these papers, this volume centers its attention on the fundamental phenomenon of phase change. The view taken in the writing of this book is that an understanding of the phase transformations in solids could be best achieved by integrating the ideas of physicists, chemists, metallurgists, ceramists, and others."

SPE journal, Oct. 1951, p.14. ⅓ col.

"While this book is primarily aimed at the research engineer, it might be of interest in the plastics fields to those who are responsible for the composition and behavior of mold metals, and indirectly to those concerned with the relation between structure and physical behavior of plastics materials. Though of specialized interest only in the plastics field, it may be observed that this is a typically fine Wiley book, and will probably be the definitive text in this field for some time."

Soden, A. L. Practical manual of rubber hardness testing. 49p. 1951. India-Rubber Journal, Stafford House, Norfolk St., London, W.C.2, $1.25.

Modern plastics, Nov. 1951, p.150. 11 l.

"Surveying the entire field of rubber hardness testing, this book explains the various hardness standard tests, considers factors affecting the design and use of testing instruments, and describes the method of use and calibration of main instruments now being employed. A bibliography contains 54 references, and four appendices give relevant conversion tables."

Spratt, H. Philip. Transatlantic paddle steamers. 69p. 1951. Brown, Son & Ferguson, Glasgow, 7s. 6d.

Journal of the Franklin Institute, Oct. 1951, p.362. ⅛ p.

"Divided into three parts which deal with the spasmodic pioneer attempts where steam was auxiliary to sails; the sustained steam power rendered possible by the invention of the condenser; and the days of the Atlantic paddle ferry. In all, 32 vessels are described. Valuable appendices provide handy reference data on details of construction and machinery, and the index is adequate. Nowhere have we been able to find such a comprehensive picture of the early days of steam on the Atlantic. Mr. Spratt's research has been of unusual diligence and the fruits are of considerable worth . . . Will serve as the reference authority on the subject." *T. C.*

Spriegel, William R., & Towle, J. W. Retail personnel management. 360p. 1951. McGraw, New York, $4.50.

Journal of retailing, Fall 1951, p.154. ½ col.

"The basic material for this text resulted from a survey made by Professors Spriegel and Towle in 1948 of retail personnel practices and interviews with store executives. It was an exhaustive and thorough study of the field. The book presents a comprehensive picture of the past and present retail personnel and training practices. Emphasis has been placed on the *status quo* in the retail stores studied in the survey." *Evelyn Fraser.*

Management review, Nov. 1951, p.716. 1⅔ col.

"The best work yet on the specialized practices of retail personnel management . . . What the book sets out to do—that is, to describe the special retail adaptations of a wide variety of personnel techniques—it does very well . . . Those who wish a well-organized, well-balanced summary of the best of current personnel practices in the retail field will find this book useful. Those who desire a more penetrating analysis of the human problems with which these techniques purport to deal will have to look further. The book they are looking for, however, has not yet been written." *James C. Worthy.*

Personnel journal, Nov. 1951, p.232. ⅜ col.

"Designed primarily for the convenience of people in the retail field and for a college text covering this field. The book has been developed from the results of a survey of practices in 130 department and specialty stores . . . Covers the entire personnel field with special emphasis on problems in retail stores . . . Well written and well presented and readers who want to enlarge their knowledge of any particular subject have the benefit of a well chosen bibliography."

Taylor, Frank J. High horizons; daredevil flying postmen to modern magic carpet—the United Air Lines story. 198p. 1951. McGraw, New York, $4.

Aeronautical engineering review, Nov. 1951, p.119. ⅜ col.

"Based on fact and recording with meticulous care the details of many important milestones in the birth of an industry . . . Taylor's account of the air-mail cancellations of 1934 is one of the most concise and accurate reviews yet written on the bolt-out-of-the-blue that came to the air lines in 1934. Another feature . . . which will be of high interest to veterans of the business, is its detailed review of the personalities behind the founding, growth, and future planning of United Air Lines . . . Taylor has done an excellent job of holding reader interest throughout the book." *R. Dixon Speas.*

Flight, Sept. 14, 1951, p.373. ⅝ col.

"The sub-title . . . gives a clue to Mr. Taylor's picturesque, American style of writing, which may cause the more conservative reader to squirm occasionally, but, on the whole, is highly entertaining and descriptive . . . Worth a place on every aviation bookshelf . . . It is a fascinating book, because many of the 'great names' in American aviation had a hand in building United Airlines. But more than 94 per cent of United's present top management people came up the hard way in the company's offices and 'off the ramp,' and Mr. Taylor pays well-merited tribute to them also."

Trinks, W. Industrial furnaces. Ed.4. v.1. 426p. 1951. Wiley, New York, $10.

American metal market, Nov. 10, 1951, p.2. ⅓ col.

"About 40% of the text has been rewritten and new illustrations and tabular data have been added . . . Recognized as the key work on industrial furnace design and construction . . . Will of course prove of great value to designers and users of industrial furnaces and to others who may want to know how to get the best value out of fuel consumption and how to apply the fuel most effectively. Obviously, this new edition should attract the attention of many engineers, production experts and executives in the metal industries."

Iron and steel engineer, Nov. 1951, p.188. ⅛ col.

"Brings the book up to date by including the latest scientific developments which research has revealed on heat transfer and furnace design, and also includes the latest in present day practice. About 40 per cent of the third edition has been completely rewritten. There is perhaps no better book available for the steel plant combustion or furnace engineer."

Vale, E. The world of cotton. 187p. 1951. Hale, London, 12s. 6d.

Journal of the Textile Institute, Sept. 1951, p.P894. ⅝ p.

"This book is the best of its kind yet published which makes it all the more unfortunate that it should have been given such a misleading title . . . A far better title . . . would have been 'The World of Cotton Spinning, Its History and Practice' if the title were intended to be a true guide to the book's contents. It is in fact an excellent non-technical account of the history of spinning and of the methods now used by cotton spinners and, although written by a layman for laymen, it provides instructive and interesting reading for the textile technologist, even one who is engaged in cotton spinning . . . A praiseworthy effort worthy of being read by all interested in our textile industry and by many outside it for some of the lessons it inculcates are applicable to all industries." *C. O. Clark.*

Wahl, A. C., & Bonner, N. A., ed. Radioactivity applied to chemistry. 604p. 1951. Wiley, New York, $7.50.

Analytical chemistry, Oct. 1951, p.1523. ⅛ col.

"Presents a comprehensive summary of the fundamental contributions to physical chemistry

that were performed with the aid of radioactive tracers . . . The authors of all the chapters appear to have done a thorough job of covering the literature through 1949 and of evaluating critically the interpretations in the original papers. The editors are to be commended for the novel and effective method of presentation and for the excellent cross references . . . Appears to be free from typographical errors and is attractively printed and bound." *L. B. Rogers.*

Chemical and engineering news, Nov. 12, 1951, p.4884. ½ col.

"In 10 well written chapters and 180 pages of detailed supplementary tables, the editors . . . present the account of radioactivity in the service of chemistry. Exchange reactions, hot atom chemistry, the behavior of radioelements in the carrier-free state, the chemistry of the 'newer' elements—these and others are the subjects of authoritative essays by specialists in each field . . . The book stimulates more questions than it answers, and can be recommended for text, reference, or just plain interesting reading." *John F. Flagg.*

Journal of the American Oil Chemists' Society, Nov. 1951, p.35. ½ col.

"This excellent book, intended primarily as a reference volume, summarizes in Part II all applications of radioactivity to chemistry published and available by January 1950. Part I covers the theory and practice of the application of radioactivity to various branches of chemistry . . . Certainly of value to anyone dealing with tracer or nuclear chemistry. It affords a valuable reference source but should not be expected to replace more general texts such as Friedlander and Kennedy's Introduction to Radiochemistry." *Frank L. Jackson.*

Soil science, Nov. 1951, p.405. ⅓ p.

"The purpose of this book is to show the applications of radioactivity to the several fields of chemistry and to present a well-documented summary of the work that has been done."

Ward, Alger L., & Roberts, W. J. Styrene. 126p. 1951. Interscience Publishers, New York, $3.50.

Chemical and engineering news, Nov. 19, 1951, p.4988. ½ col.

"Describes the preparation, purification, care and handling, physical and thermodynamic properties, chemical properties, and polymerization of styrene. Each of these subjects is covered concisely but thoroughly. The authors seem to have put an extensive amount of information into a relatively small monograph. Some 200 references are quoted . . . Well written and well organized. It is too bad that the binding and printing are not better because the authors have done an exceptional job writing and organizing the material." *Nicholas N. T. Samaras.*

India rubber world, Oct. 1951, p.100. ¼ col.

"A complete revision and extension of the section on styrene contained in Section I of 'Monomers,' published in 1949. While retaining the same general organization of the previous section, the expansion in coverage of the subject by this booklet is exemplified by the increase in number of pages from 66 to 131 and in number of bibliography references from 86 to 201."

Watson, Stephen J., & Smith, A. M. Silage. 143p. 1951. Lockwood, London, 10s. 6d. net. (Agricultural and horticultural series.)

Nature, Oct. 13, 1951, p.620. ¾ col.

"Written in the plainest language; it deals sufficiently with the underlying principles and exhaustively with the details of the various methods . . . Will be welcomed by farmers and by students, and it should do much to consolidate the position which silage-making has newly won." *H. G. Sanders.*

Welchman, W. Gordon. Introduction to algebraic geometry. 351p. 1950. Cambridge Univ. Press, London, $4.50.

Mathematical reviews, Oct. 1951, p.734. ⅜ col.

"A treatise on algebraic projective geometry of the plane with extensions to higher dimensions. Designed as an introduction to more advanced work, the author applies 'to the more elementary problems the types of reasoning that are used in advanced work' . . . The book would be better adapted to its purpose if it contained problems for the student to solve . . . Well written, the expositions clear and ample. The printing is excellent and the formulas well displayed . . . As a whole, the book is well suited to achieve a worthwhile goal, to 'help some students to appreciate the volumes on Principles of Geometry . . . by Professor H. F. Baker'." *T. R. Hollcroft.*

Science progress, Oct. 1951, p.720. ½ p.

"The aim of this book is to provide an introduction to projective geometry upon an algebraic basis, the geometry associated with the field of complex numbers . . . Will undoubtedly be helpful to readers with some previous knowledge of the subject; a beginner is likely to find difficulty in grasping the ideas presented in the introductory chapters. There are, however, occasional references to other books, which indicate that some previous knowledge of this geometry is expected. Some readers will regret the absence of exercises set to serve as problems for the student." *T. L. W.*

Weller, B. F. Radio technology. Ed.3. 413p. 1951. Chapman & H., London, 30s.

Electronic engineering, Sept. 1951, p.365. 1¼ col.

"Third edition of a book first published 'some seven years' ago, but even so it still contains a large number of inaccuracies and confused statements . . . A book to be avoided by any inexperienced student who has not a tutor to guide him, though with such assistance the numerous practical illustrations could be valuable." *C. R. G. Reed.*

West, Clarence J. See American Paper and Pulp Association.

West, L. S. The housefly. 584p. Comstock Pub. Co., Ithaca, N. Y., $7.50.

Soap and sanitary chemicals, Nov. 1951, p.83. ⅝ col.

"A complete study of the housefly is contained in this text, which includes a well balanced discussion of several phases of this subject, such as the morphology, physiology, behavior, life history, taxonomy, distribution, ecology, relation to disease, usefulness in the laboratory and in nature, techniques in the field, museum and laboratory, control measures, prevention, and bibliography . . . The discussions proceed in a clear and well defined manner, so that the text is readily understood by

all intelligent readers who may be interested in natural history, sanitation or public health . . . More than 175 illustrations are contained . . . A bibliography of more than 1100 references completes the volume."

Weyl, Charles, & Warren, S. R., jr. Radiologic physics. Ed.2, revised. 491p. 1951. C. C. Thomas, Springfield, Ill., $10.50.

United States armed forces medical journal, Nov. 1951, p.1761. ⅜ p.

"Provides a valuable and well-tested source of fundamental material, both theoretical and practical, for those engaged in the study and use of physical radiation as applied to medicine . . . Intended primarily as a textbook for physicians who are studying radiology as a specialty. The authors assume no knowledge of mathematics and proceed gradually from the most elementary considerations to advanced material. By bridging the gap between little or no knowledge and advanced specialization, this book not only supplies the needs of student [sic] radiologists but materially aids the information of practicing radiologists about contemporary physical theories and their applications to radiology . . . Serves the additional purpose of providing the radiologic physicist and technician with essential fundamental information." *M. Dauer.*

Wigglesworth, V. B. Principles of insect physiology. Ed.4, revised. 544p. 1950. Methuen, London, 42s. net.

Science progress, Oct. 1951, p.758. ¾ p.

"The fundamental plan of the original publication is retained, with the addition of an author-index of some 1700 names as an entirely new feature. New citations in the references number nearly 1000 and there are about 40 new figures. The production of the book is excellent as regards the quality of the paper, the clarity of print and illustrations, and in its durable binding." *D. S. Bertram.*

Winchester, Albert M. Genetics; a survey of the principles of heredity; edited by Bentley Glass. 371p. 1951. Houghton, Boston, $5.

Science, Nov. 9, 1951, p.507. 1 col.

"The great majority of students in an elementary genetics course have no special aptitude or interest in the subject and have no intention of going further in it. This book is written for such a group . . . The book seems to me to be oversimplified, but that is for the student readers to decide. It will leave many questions unanswered for the serious student, and unfortunately there is no system of references to direct him to more information on those points where his curiosity has been so effectively aroused. The book is not written for the serious student, however. Furthermore, it sets a new standard in interest appeal in a textbook, and as such should be a real contribution to the effective teaching of genetics." *James F. Crow.*

Winters, Robert K., ed. Fifty years of foresty in the U. S. A. 385p. 1950. Society of American Foresters, Washington, D. C., $4.

Scientific monthly, Sept. 1951, p.198. 1⅓ col.

"Of interest not only to the scientist, but particularly to the general reader . . . Prepared by a committee of nineteen members of the Society . . . to mark the society's fiftieth anniversary, and is in nineteen chapters, each by a specialist in the subject covered. All are easy for the nonprofessional reader to understand, and some make extremely interesting reading . . . A very good book, as well as a record of outstanding accomplishment and of necessary future action." *Barrington Moore.*

Wyckoff, Ralph W. G. Crystal structures. 3v. 1951. Interscience Publishers, New York.

v.2. 668p. $10.

Supplement to v.1. $4.

Chemical engineering, Oct. 1951, p.328, 330. 1 col.

"Vol. II covers compounds of the following types: $Rn(MX_4)p$, $Rx(MXm)y$, ammoniates, hydrates as well as aliphatic organic compounds, with the same thorough treatment as in the earlier volume . . . The supplement to Vol. I brings the information contained therein complete to 1949 with additional references to work done in earlier years. Included in the supplement are a new title page and a new index. With the forthcoming publication of Vol. III and future supplements, Wyckoff's 'Crystal Structures' will be the standard reference book of crystal structure data and, as such, is indispensable to scientists and engineers interested in the study of the solid state." *Joseph S. Lukesh.*

Youden, William J. Statistical methods for chemists. 126p. 1951. Wiley, New York, $3.

Chemical week, Nov. 3, 1951, p.44. ⅓ col.

"Writing from a laboratory standpoint, the author directs this book to those who 'make measurements and interpret experiments'; he presents for the scientist the modern statistical system of units for expressing scientific conclusions."

Soap and sanitary chemicals, Nov. 1951, p.81. ¼ col.

"Written for those who make measurements and interpret experiments. The first chapter gives a brief summary of statistical methods, while the next few chapters are concerned with accuracy of measurements, tolerance, etc. Examples and interpretation of data are given. Discussions on the resolution of errors, statistics of the straight line, an analysis of variance, and arrangements for improving precision are included in the text."

Zaleznik, A. Foreman training in a growing enterprise. 232p. 1951. Harvard Business School, Soldiers Field, Boston, $3.50.

Textile world, Nov. 1951, p.250. ⅙ col.

"Professor Zaleznik in this study has focused his attention on the foreman as a company administrator, and then asks the question: What kind of help do supervisors need in the way of training for more effective action on the job? Intensive observations of a particular foreman, called 'Tony' in the book, in an assembly-line operation give the reader helpful understanding of typical supervisory problems out on the job."

AUTHOR INDEX

Including titles of anonymous works

Jan., p.1-20; Feb., p.21-40; March, p.41-60; April, p.61-80; May, p.81-100; June, p.101-120; Sept., p.121-140; Oct., p.141-160; Nov., p.161-180; Dec., p.181-204

—A—

Abbey, Staton, 121, 161
Abbott, W., 141
Abraham, Max, 181
Adams, Roger. See Organic reactions, 191
Adkins, Bernard, & Gibbs, W. J., 141
Adlam, T. Napier, 1
Adler, Francis Heed, 81
Advances in biological and medical physics, 161
Advances in carbohydrate chemistry, 161
Agnew, Hugh E., 61
Agnew, Hugh E., & Houghton, Dale, 81
Ahern, Eileen, 121
Ahrendt, William R., & Taplin, J. F., 181
Ahrens, L. H., 101
Aiken, Daymond J., & Henderson, K. B., 181
Air Conditioning and Refrigerating Machinery Association, Incorporated, 61
Albanese, Anthony A., 121
Albert, Adrien, 81, 181
Alexander, Albert E., 181
Alexander, Jerome, 21
Alger, Philip L., 161
Allcock, H. J., & Jones, J. R., 61
Allen, Charles F. H., 141
Allen, Shirley Walter, 81
American Iron and Steel Institute—Technical committee on refractories, 121
American Paper and Pulp Association, 182
American Society of Mechanical Engineers, 1
Amsden, John Page, 1
Anderson, Camilla M., 41
Anderson, E. W., 162
Anderson, Miles H., 121
Andrade, Edward N. da C., 141
Andres, Paul G., 2
Andrews, Roy Chapman, 162
Andrews, W. B., 2
Anner, George E., 162
Anness, Edward G., 81
Ansley, A. J., 101
Anson, Barry J., 61
Antia, K. F., 21
Aries, Robert S., & Copulsky, William 2, 21
Aries, Robert S., & Newton, R. D., 2
Aries, Robert S., & Nickolaus, Anthony, 2
Armitage, Angus, 41
Arnot, F. L., 2
Artz, Neal E., & Osman, E. N., 82
Ashburn, Anderson, 162
Ashdown, Alfred J., 121
Ashley, James W., 61
Ashley-Montagu, Montague Francis, 101
Ashworth, James R., 2
Aspley, John Cameron, 22
Association of Vitamin Chemists, Incorporated, 82
Atkinson, Arthur D. S., 162
Atkinson, J., 41
Audrieth, L. F., & Ogg, B. A., 121
Auth, G. H. See Johnson, Allan J., & Auth, G. H., 69
Avery, John H., & Ingram, A. W. K., 122
Ayre, H. Glenn, 41

—B—

Babkin, B. P., 82
Bablik, H., 22
Bacas, Paul E., 101
Bacon, John S. D., 122
Baer, Jean G., 141
Bailey, Alton E., 142
Bailey, Arnold B., 42
Bailey, Benjamin F., & Gault, J. S., 182
Bailey, J. H. Shackleton, 122
Bailey, Stanley F., & Smith, L. M., 142
Baily, H. Heaton, 101
Baker, F. B., 3
Baker, Frederick S., 122
Barish, Norman, 162
Barksdale, Jelks, 82
Barlow, Harold M., & Cullen, A. L., 42
Barnard, John Darrell, & Edwards, L. E., 122
Barnett, Edward de Barry, 3
Baron, A. L., 42
Bastian, E. L. H., 102
Batson, Reginald G., 3
Battelle Memorial Institute, 42
Battison, John H., 42
Bawden, Arthur T., 22
Bawden, F. C., 3
Beaufort, Lieven Ferdinand de, 122
Beckett, J. A., 162
Bedoukian, Paul Z., 62
Beer, Bertram V. A. Low-. See Low-Beer, Bertram, V. A., 53
Beet, E. A., 43
Behrens, Charles F., 182
Bell, Eric Temple, 102
Bender, James F., 3
Benedict, R. Ralph, 122
Bennett, H., 62
Benson, F. A., 22
Berke, Jacqueline, & Wilson, Vivian, 163
Berl, Walter G., 122
Bessey, Ernst Athearn, 22
Beveridge, W. I. B., 43
Bevis, P. C., 22
Bewley, Loyal V., 102
Beyer, Karl H., 62
Bibby, Cyril, 123
Bigger, Joseph W., 3
Billman, John H., & Cleland, E. S., 182
Binder, R. C., 142
Bird, C. L., 142
Birdsall, G. W., 22
Birkhoff, Garrett, 23
Birkhoff, George David, 62
Blair, George W. Scott. See Scott Blair, George W., 157
Blake, G. G., 102
Blandford, P. W., 23
Block, Richard J., & Bolling, Diana, 82
Bloomquist, Walter C., 4
Blum, Harold F., 182
Blume, Louis F., 102
Bohm, David, 142
Bolton, D. J., 43
Bondi, Arnold A., 142
Bonner, James, 62
Bonner, N. A. See Wahl, A. C., & Bonner, N. A., 195
Borofsky, Samuel, 103
Boston, Orlan William, 123
Bosworth, R. C. L., 82
Bouman, C. A., 123
Bouman, J., 163
Bourne, G. H., 123
Bowden, C. E., 142
Bowden, Frank P., & Tabor, David, 43
Boyce, C. W. See Urquhart, Lewis K., & Boyce, C. W., 138
Boyd, William C., 23
Bozorth, Richard M., 103
Brachet, Jean, 103
Bradford, Ernest S., 103
Brandwein, Paul F., 123
Braun, E. Lucy, 43
Bray, Thomas J., 103
Bray, William C., 23
Breazeale, William M., & Quarles, L. R., 143
Brennen, Ed, 163
Brierley, William B. See Gäumann, Ernst A., 27
Brimm, Daniel J., & Boggess, H. E., 43
Brindley, G. W., 163
Brinkley, Stuart R., 182
Briscoe, H. V. A., & Holt, P. F., 63
British Aluminium Company, Limited, 182
Broda, Engelbert, 103
Brooks, Benjamin T., 43
Brown, Anthony W. A., 163
Brown, Aubrey I., & Marco, S. M., 164
Brown, Charles L., 143
Brown, Leslie S., 164
Brown, Nelson Courtland, 44
Brown, P. T., 164
Brown, R. C., 44
Browne, W. R. See David, T. W. Edgeworth, 145
Bruce, Arthur G., & Clarkson, John, 164
Bruce, Donald, & Schumacher, F. X., 63
Bryan, Arthur H., & Bryan, C. G., 143
Buchanan, Robert E., 183
Buchsbaum, Walter H., 4
Buckley, H. E., 83
Buddhue, John Davis, 44
Bull, Sleeter, 183
Bullen, Francis L., 4
Burger, Alfred, 123
Burger, Martin, 104, 123
Burgess, Charles O., 183
Burkhardt, Charles H., 143
Burn, Joshua H., 23
Burns Morton, F. J., 143
Burrows, Harold, 4
Busvine, James R., 143
Butler, J. A. V., 63. See also Progress in biophysics and biophysical chemistry, 75

—C—

Cable, Emmett J., 183
Cage, John M., 143
Calder, Ritchie, 143
Callahan, Alston, 63
Cameron, E. J., & Esty, J. R., 44
Cameron, Gladys, 4
Campbell, D. A., 63
Candler, C., 144
Cantor, Sidney M. See Advances in carbohydrate chemistry, 161

Cargnino, Lawrence T., & Karvinen, C. H., 164
Carhart, Arthur H., 123
Carlander, Kenneth D., 104
Carmichael, Leonard. See Gibson, James J., 107
Carnap, Rudolf, 124
Carr, Thomas H., 124, 183
Carrier, Willis H., 4
Carroll, Phil, 63, 164
Carter, George S., 124, 164
Casamassa, Jack V., 23
Casey, Robert S., & Perry, J. W., 164
Cassidy, Harold Gomes, 144
Cazaly, William H., & Roddam, Thomas, 165
Chalmers, Bruce, 83
Chalmers, T. W., 124
Chapelle, Howard I., 23
Chaplin, Allen L., 84
Chapman, Herman H., 63
Chapman, Paul W., 44
Chapman, Sydney, 183
Chapman, Valentine J., 84
Chapman, William A. J., 144
Chatfield, H. W., 84
Chestnut, Harold, & Mayer, R. W., 124
Childs, William H. J., 5
Chisholm, A. J., 144
Chitwood, Benjamin G., & Chitwood, M. B., 24
Chu, Ju Chin, 44
Church, Edwin F., jr., 64
Churchill, S. Collard, 84
Clark, Charles E., 124
Clark, David, 165
Clark, James G., 64
Clarke, Edith, 45
Clarkson, Ronald, 124
Clayden, E. C., 104
Clayton, Albert E., & Shelley, H. J., 165
Clayton, E. B., 24
Clendinning, James, 84
Clymer, Floyd, 45
Cobb, Ivo Geikie-. See Geikie-Cobb, Ivo, 67
Cocannouer, Joseph A., 24
Cocking, W. T., 64
Cockrell, W. D., 45
Coffman, C. De Witt, 45
Cofield, E. P., jr., 183
Cole, E. B., 24
Cole, S. M., 84
Coleman, H. S., 85
Collacott, R. A., 144
Collens, William S., & Boas, L. C., 5
Conant, James B., 104
Concordia, Charles, 124
Condensed chemical dictionary, 5
Connelly, Frank C., 45
Constance, John D., 85
Conway, E. J., 125, 144
Conway, Harry D., 125
Cooke, Richard G., 184
Cooper, J. W., & Gunn, Colin, 5
Cooper, Leslie A., 64
Corliss, Carlton J., 24
Corliss, John J., & Berglund, W. V., 184
Corner, E. J. H., 64
Corner, J., 45
Correll, Donovan S., 125
Corson, Edward M., 165
Cosslett, Vernon E., 165, 166
Cotterill, Carl Hayden, 85
Coultas, H. W., 64
Coulthard, William B., 166
Courant, Richard, 104
Courchaine, Armand Joseph, 45
Creamer, Walter J., 184
Crede, Charles E., 145
Crompton, John, 64
Crouse, William H., 184
Cullimore, M. S. G., & Pugsley, A. G., 184
Culver, Charles A., 145
Cumming, J. D., 125
Cumming, W. M., 105
Cunningham, Henry M., & Sherman, W. F., 166
Curran, C. H., 125
Curtis, Otis F., & Clark, D. G., 6

—D—

Danielli, J. F., 24
Darlington, Cyril D., & Mather, Kenneth, 45
Datta, R. L., 64
David, T. W. Edgeworth, 145
Davidson, J. N., 105
Davies, Cornelius, 85, 125
Davis, J. G., 145
De Beaufort, Lieven Ferdinand. See Beaufort, Lieven Ferdinand de, 122
De Carle, Donald, 24
De France, Joseph, 145
De Groot, S. R., 166
Delens, A. H. R., 46
Demerec, M., 25
Deming, William Edwards, 25
Deniston, George L., 6
Deryck, W., 145
De Seversky, Alexander P., 65
Deutsch, Sid, 145
DeVoe, Merrill, 65
De Vries, Louis, 46
Dewar, Thomas, 6
Dewberry, Elliott B., 46
Dickinson, Christopher J., 65
Dickinson, Denis, 125
Dickson, John Home, 105
Dietsch, F. F., 105
Dingle, Herbert, 166
Diserens, Ludwig, 145
Dixey, Frank, 85
Dixon, Arthur L., 65
Dixon, Wilfred, & Massey, Frank, jr., 145
Doehler, Herman H., 85
Dome, Robert B., 184
Dommasch, Daniel O., 105
Dorcus, Roy M., & Jones, M. N., 105
Dorr, John V. N., & Bosqui, F. L., 65
Douglass, Raymond D., & Zeldin, S. D., 105
Dowsett, H. M., & Walker, L. E. Q., 25
Doyle, Lawrence E., 46
Draffin, Jasper O., & Collins, W. L., 25
Drake, Rollen H., 105
Drew, F. A., 166
Duckworth, C. L. D., & Langmuir, G. E., 25
Duddle, Robert S., 184
Duffy, Ben, 106
Dull, Raymond, & Dull, Richard, 184
Du Mond, T. C., 126
Duncan, Winifred, 6
Dunham, Clarence W., 26
Dunlap, Orrin E., jr., 46
Dunn, L. C., 185
Dunsheath, Percy, 126
Durham, Franklin P., 167
Durrant, Philip J., 106
Dushman, Saul, 145
Dutcher, R. Adams, 86
Dyer, Walter S., & Mueller, M. E., 47
Dyson, Fred, 185

—E—

Eardley, A. J., 146
Eby, George S., 106
Eckles, Clarence H., 167
Ecklund, Eugene, 126
Edwards, Richard B., 185
Edwards, Ronald S., 26
Eggleston, Wilfrid, 65
Ehlers, Victor M., & Steel, E. W., 65
Eitel, Wilhelm, 146
Elderfield, Robert C., 126
Elton, Charles, 47
Emmens, Clifford W., 86
Emmet, Boris, & Jeuck, J. E., 26
Encyclopedia of chemical technology, 146
Engel, Harry C., 6
Engineering Research Associates, Incorporated, 6
Essipoff, Marie A., 146
Esty, J. R. See Cameron, E. J., & Esty, J. R., 44
Evans, Henry K., 106

—F—

Fabricant, Noah D., 6
Fabry, Charles, 146
Falk, Karl H., 6
Fanning, Leonard M., 86
Farmer, Joe H., 26
Farrington, G. H., 167
Farrington, S. Kip, jr., 167
Farris, Edmond J., 26
Faust, Frank H. See Oil-Heat Institute of America, Incorporated, 174
Fearnside, K., 185
Feigenbaum, Armand V., 86
Fich, Sylvan, 146
Finan, John J., 86
Finar, I. L., 106
Finch, James Kip, 146
Findlay, G. M., 126
Fink, O. E. See Forman, Jonathan, & Fink, O. E., 66
Finkelnburg, Wolfgang, 7
Finney, H. A., & Miller, H. E., 167
Fischer, Earl K., 47
Fish, John C. L., 66
Fisher, Douglas A., 185
Fisher, R. A., 47
Fisher, Robert Moore, 146
Fister, Harold J., 7
Fleming, Alexander, 47
Floherty, John J., 47
Ford, Clellan S., & Beach, F. A., 126
Forman, Jonathan, & Fink, O. E., 66
Foster, Jay Rhoads, & Rodey, B. S., jr., 147
Foster, John F. See Battelle Memorial Institute, 42
Fox, Willard M., 27
Francis, Carl C., & Knowlton, G. C., 106
Frandsen, J. H., & Nelson, D. H., 66
Frank, Arnold F. W., 126
Frank, Bernard, & Netboy, Anthony, 27
Frank, G. H., 66
Frank, Nathaniel H., 167
Fraser, Allan, 86
Frear, Donald E. H., 147, 185
Freeman, Ruth B., 106
Freund, M., 66
Frisch, Karl von, 66
Frisch, O. R. See Progress in nuclear physics, 115
Frith, Elizabeth M., & Tuckett, R. F., 147
Frye, John T., 186
Fulmer, Herman K., & Reynolds, Walter, 186
Funke, J., & Oranje, P. J., 147
Fuson, Reynold C., 27

—G—

Gabrielson, Ira N., 87
Gagnon, John E., & Verney, R. E., 66

Galloway, L. D., & Burgess, R., 48
Garik, Michael Liwschitz-. See Liwschitz-Garik, Michael, & Gentilini, Celso, 13
Garner, John F., 67
Garrels, Robert M., 147
Garrigus, Wesley P., 185
Gäumann, Ernst A., 27
Geiger, Rudolf, 48
Geikie-Cobb, Ivo, 67
Gerstell, Richard, 87
Ghirardi, Alfred A., & Johnson, J. R., 126
Gibbs, R. Darnley, 7
Gibson, James J., 107
Gillespie, Cecil M., 147
Gillett, H. W., 87
Gilluly, James, 168
Gilson, John, 186
Gitlin, Paul, & Woodward, W. R., 87
Glaister, John, 48
Glascock, Raymond, 186
Glass, Bentley. See McElroy, William D., & Glass, Bentley, 131
Glass, Bentley, See Winchester, Albert M., 197
Glasstone, Samuel, 48
Goetzel, Claus G., 7
Golomb, Michael, & Shanks, Merrill, 8
Gooch, Bernard, 87
Good, Dorothy. See Pratt, Wallace E., & Good, Dorothy, 36
Good, Isidore J., 87
Goodey, T., 148
Gordon, E. S., 127
Gottscho, Samuel H., 168
Graham, Frank D., 88
Graham, Irvin, 168
Grassie, James C., 67
Gray, Dwight E., & Martens, J. H., 88
Greco, Marshall C., 67
Greenberg, David M., 107
Greenberg, Leon A., 27
Greenleaf, Allen R., 8
Gregory, R. W. See Garrigus, Wesley P., 186
Gregory, William King, 148. See also Raven, Henry Cushier, 56
Greisheimer, Esther M., 127
Grierson, Ronald, 48
Griffin, Carroll W., & Plunkett, M. A., 187
Griffiths, R., 107
Groesbeck, Harry A., jr., 28
Groves, A. W., 148
Guenther, Ernest, 28
Guest, G. H., 168
Guillet, George L., 67
Gumz, Wilhelm, 28

—H—

Haarer, A. E., 49
Haas, Kenneth B., & Ewing, C. H., 28
Haas, Kenneth B., & Packer, H. Q., 88
Hadekel, R., 148
Hagedoorn, A. L., 107
Hager, Dorsey, 149
Hägglund, Erik, 187
Hahn, Paul F., 107
Hall, Newman A., 149, 168
Hall, Thomas S., 149
Hall, W. J. See Review of textile progress, 1949, 76
Halliday, David, 67
Hallows, Ralph W., 29, 127
Halmos, Paul R., 49
Hamerslag, Frank E., 49
Hamilton, Joseph G. See Advances in biological and medical physics, 161
Hanchett, Kent S., 8
Handisyde, Cecil C., 88
Hanlon, John J., 29
Harbison-Walker Refractories Company, 8
Hardenbergh, William A., 8
Harrington, Carl C., 8
Harris, J. Donald, 8
Harrison, John, 67
Harrow, Benjamin, 127
Hartshorne, N. H., & Stuart, A., 107
Hartsuch, Bruce E., 88
Hartzell, Karl D., 187
Haskins, Caryl P., 127
Hatcher, Harlan, 29
Haurowitz, Felix, 67
Hawker, Lilian E., 127
Hawkins, George A., 107
Hawkins, Reginald R., 49
Hay, A. Donald, & Roberts, C. P., 88
Heath, A. E., 169
Heaviside, Oliver, 29
Hedrick, Ulysses P., 9
Hegner, Robert W., & Stiles, K. A., 187
Heisig, G. B., 9
Heldt, Peter M., 108
Helme, E. T. Lawson, 149
Hempel, Edward H. See American Society of Mechanical Engineers, 1
Hendrix, Charles E., 49
Henney, Keith, 9
Herb, Charles O., 128
Herms, William B., 108
Herrmann, Günther, & Wagener, Siegfried, 167, 187
Hersey, Rexford B., 128
Hertz, David Bendel, 9
Hertz, Louis H., 128
Hess, Manfred, 128
Hetherington, H. W., & Eshleman, F. W., 88
Heuer, Kenneth, 108
Hewitt, L. F., 9
Hickey, James C., 128
Hickman, Cleveland Pendleton, 128
Higham, S., 49
Hildebrand, Joel H., & Scott, R. L., 49
Hill, R., 89
Hillier, H., 50
Hilton, W. F., 149
Hilts, Leonard F. See Lipsner, Benjamin B., 130
Hinman, C. W., 50
Hinshelwood, Cyril N., 169
Hlasta, Stanley C., 9
Hoare, Cecil A., 30
Hobart Trade School, Incorporated, 10
Hoffman, M. David, 10
Hoffmann, Edmund, & Gwin, J. M., 89
Hogg, John C., 169
Holmes, Arthur W., 169
Holmes, Cecil T., 108
Holmes, Richard E., 149
Holness, Harry, 149
Hooper, C. J. W. See Review of textile progress, 1949, 76
Hoover, Theodore J., & Fish, J. C. L., 89
Hopkin & Williams, Limited, London, 68
Hopkins, Edward S., & Elder, F. B., 89
Hopkins, H. H., 89
Hordern, Robert H., 169
Hörstadius, Sven, 108
Horton, Holbrook L., 68
Houghton, P. S., 50, 89, 109
Housner, George W., & Hudson, D. E., 109
Howarth, W. O., & Warne, L. G. G., 109
Howe, Harold Bartlett, 187
Hrones, John A., & Nelson, G. L., 128
Hubbell, Richard, 30
Hückel, Walter, 68
Hudson, Claude S. See Advances in carbohydrate chemistry, 161
Hughes, H. D., 169
Hull, Daniel R., 30
Hume, Kenneth J., 69
Hund, August, 128
Hvorslev, Mikael Juul, 69
Hyman, Libbie H., 109

—I—

Industrial and Engineering Chemistry, 50
Ingham, H. S., & Shepard, A. P., 187
Inglis, Charles, 170
Israelsen, Orson W., 10

—J—

Jackson, Leonard C., 10
Jackson, Lucille. See Special Libraries Association—Science-Technology division, 177
Jacob, L., 188
Jacobs, Morris B., 150, 170
Jacobson, C. A., 170
Jakob, Max, & Hawkins, G. A., 9
Jaeger, Edmund C., 90
Jeans, James, 150
Jefferson, T. B., & Brooking, W. J., 50
Jeffreys, H., & Jeffreys, B. S., 50
Jenkins, Francis A., & White, H. E., 69
Jennings, John, 170
Johnson, Allan J., & Auth, G. H., 69
Johnson, Arnold W., 10
Johnson, Elmer J., & Hollenberg, A. H., 90
Johnson, Martin, 10
Johnson, R. C., 11
Johnson, Walter C., 51
Jones, D. W. Kent-. See Kent-Jones, D. W., & Price, John, 170
Jones, Franklin D., 70
Jordan, Edward C., 109
Joslyn, Maynard A., 51
Judge, Arthur W., 51, 70, 90, 150
Juran, J. M., 188

—K—

Kamen, Ira, & Dorf, R. H., 129
Karakash, John J., 70
Karch, Robert Randolph, 51
Karrer, Paul, & Jucker, Ernst, 51
Katz, Joseph J., & Rabinowitch, Eugene, 150
Kauffmann, F., 30
Kaufman, Milton, 150
Kaufman, Theodore. See Oil-Heat Institute of America, Incorporated, 174
Kaufman, William I., & Colodzin, R. S., 51
Kaupp, Benjamin F., & Surface, R. C., 11
Kelley, Arthur P., 51
Kelley, Walter P., 151
Kelly, Burnham, 188
Kent, Andrew, 109
Kent-Jones, D. W., & Price, John, 170
Kerchner, Russell M., & Corcoran, G. F., 109
Kerekes, Frank, & Winfrey, Robley, 109

Kerr, Donald E., 129
Kershner, R. B., & Wilcox, L. R., 11
Kertesz, Z. I., 171
Keys, Ancel, 11
Kierstead, Sallie Pease, 129
Kimbark, Edward W., 90
Kingston, Walter E., 129
Kinney, Ralph Parsons, 91
Kinsler, Lawrence E., & Frey, A. R., 11
Kirk, Raymond E. See Encyclopedia of chemical technology, 146
Kiver, Milton S., 151
Klots, Alexander B., 129
Klotz, Irving M., 70
Knaysi, Georges, 109
Kobe, Kenneth A., 52
Kolin, Alexander, 151
Kortüm, Gustav, & Bockris, J. O'M., 189
Kosloff, Albert, 30
Kosolapoff, Gennady M., 30
Kraehenbuehl, John O., 110
Kramer, Edna E., 110
Krantz, John C., jr., & Carr, C. J., 189
Kraus, John D., 52
Kremers, Edward, & Urdang, George, 171
Kress, A. L., & Armstrong, T. O., 70
Krueger, Walter W., 110
Krumbein, W. C., & Sloss, L. L., 110
Kubaschewski, Oswald, & Evans, E. L., 110
Kuenen, P. H., 31
Kuethe, Arnold M., & Schetzer, J. D., 31
Kuhlmann, John H., 11
Kuhn, Hedwig S., 11
Kulmann, C. A., 171
Kunin, Robert, & Myers, R. J., 52
Kuns, Ray F., 171

—L—

Labatut, Jean, & Lane, W. J., 129
Ladner, Alan W., & Stoner, C. R., 129
Ladoo, Raymond B., & Myers, W. M., 129
Laidler, Keith J., 91
LaJoy, Millard H., & Larsen, O. M., 171
Lamb, John, 110
Lambe, Thomas William, 189
Lamney, W. Clyde, 110
Landes, Kenneth K., 91
Landy, Thomas M., 12
Lane, Ferdinand C., 70
Lane, W. J. See Labatut, Jean, & Lane, W. J., 129
Langewiesche, Wolfgang, 171
Langhaar, Henry L., 151
Larson, Adlowe L., 171
Latimer-Needham, Cecil H., 31
Laurence, William L., 52
Lawrence, John H. See Advances in biological and medical physics, 161
Leach, H. W., & Beakley, G. C., 189
Learned, Edmund P., 130
Lee, James A., 31
Lee, Samuel J., 12
Lemaitre, Georges, 71
Lent, Deane, 189
Leonard, Frederick, & Hutterer, C. P., 110
Lepawsky, Albert, 31
Leprince-Ringuet, Louis, 111
Lerner, I. M., 91
Lesser, Milton A., 130
Lewis, Bernard, & Von Elbe, Guenther, 151
Lewis, Lena A., 151
Ley, Willy, 91, 151
Libby, C. Earl, & O'Neil, F. W., 12
Liddicoat, Richard T., jr., 151
Lincoln Electric Company, 12
Lindgren, C. W., 91
Lindquest, Calvert B., 53
Lipsett, Charles H., 151
Lipsner, Benjamin B., 130
Liston, Joseph, 12
Littlejohn, H. F., jr., 130
Littleton, Charles T., 171
Littlewood, Dudley E., 31
Liwschitz-Garik, Michael, & Gentilini, Celso, 13
London, Fritz, 71
Love, Clyde E., 172
Low-Beer, Bertram V. A., 53
Lowry, H. V., & Hayden, H. A., 130
Lowy, Alexander, & Harrow, Benjamin, 152
Lucas, Miriam Scott, 53
Luker, Leslie G., 111
Lund, R. J. See Battelle Memorial Institute, 42
Lundegardh, H., 130
Luzadder, Warren J., 131
Lynch, Douglas C., 13
Lyons, C. G., & Appleyard, F. A., 131

—M—

McClain, M. Esther, 111
McClung, Clarence Edwin, 53
McCorkle, Paul, 32
McCrea, William H., 53
McCutcheon, John W., 71
McElroy, Thomas P., jr., 32
McElroy, William D., & Glass, Bentley, 131
MacFall, Russell P., 71
McGinnis, R. A., 190
McGowan, George, 92
McIlroy, R. J., 190
McIlwain, Knox. See Pender, Harold, & McIlwain, Knox, 55
Macintire, Horace J., & Hutchinson, F. W., 13
McLachlan, Norman W., 32
Macmillan, R. H., 152
MacNevin, William Marshall, 92
MacNiece, E. H., 172
Macy, Icie G., 152
Maerz, A., & Paul, M. R., 32
Magnel, Gustave, 111
Maheswari, P., 32
Malherbe, I. de V., 131
Malkin, Richard, 131
Mallick, Randolph W., & Gaudreau, A. T., 111
Mallinson, R. F. A., & Grugeon, R., 71
Mallory, Virgil S., 112
Mallory, Virgil S., & Skeen, K. C., 112
Mallory (P. R.) & Company, Incorporated, 32
Mandelker, Jakob, 131
Mann, Henry B., 53
Mantell, C. L., 172
Manter, Harold W., 32
Manton, I., 112
March, Arthur, 172
Markley, Klare S., 54
Marks, Lionel S., 92
Martin, Alexander C., 172
Martin, Geoffrey, 71, 112
Martin, Louis C., 92
Martin, T. Leroy, 112
Martin, Thomas L., jr., 71
Mason, Linton W., 131
Mason, Warren P., 54
Massey, Harrie S. W., 72
Material Handling Institute, Incorporated, 132
Matheson, Robert, 152
Maxwell, E. A., 190
Mayer, Edward N., jr., 54
Mayneord, William V., 33
Mazairz, Edward A., 72
Mee, John F., 112
Mellan, Ibert, 72
Mellanby, Edward, 72
Melnitsky, Benjamin, 173
Mercer, L. Boyd, 190
Merchant, I. A., 112
Meredith, Florence L., 132
Messersmith, Charles W., & Warner, C. F., 54
Metcalfe, J. E., 173
Meyer, Erich, 72
Meyer, Harvey G., 112
Meyer, Kurt H., 73
Michell, A. G. M., 113
Michels, W. C., & Patterson, A. L., 152
Middleton, H. A., 54
Miller, Albert R., 73
Miller, George A., 92
Miller, Henry A., 190
Miller, Robert F. E., 190
Miller, W. E., 73
Millman, Jacob, & Seely, Samuel, 190
Mills, George J., 132
Milne-Thomson, Louis M., 132
Miner, Roy Waldo, 33
Mitchell, David R., 73
Mitchell, J. W., 191
Mitchell, Philip H., 33
Moffatt, C. W. Paget, 152
Mohler, J. B., & Sedusky, H. J., 152
Molloy, Edward E., 33, 73
Moment, Gairdner B., 34
Mommaerts, W. F. H. M., 191
Moncrieff, Robert W., 93, 191
Monnett, Victor E., & Brown, H. E., 113
Monroe, Robert T., 173
Montagu, Montague Francis Ashley-. See Ashley-Montagu, Montague Francis, 101
Monypenny, John H. G., 191
Moog, Florence, 13
Moon, Truman J., 132
Moore, Walter J., 34
Moreton, Bernard D., 13
Morey, Lloyd, & Hackett, Robert, 73
Morland, Nigel, 54
Morley, A. W., 191
Morris, Joe Lawrence, 173
Morse, Philip M., & Kimball, G. E., 93
Morton, F. J. Burns. See Burns Morton, F. J., 143
Moses, Graham Lee, 191
Moskowitz, Sidney, & Racker, Joseph, 132
Most, Harry, 153
Motz, H., 113
Moyer, Cecil A., & Mautz, R. K., 113
Mueller, Robert Kirk, 132
Mulinos, Michael G., 113
Müller, Otto H., 113
Mundel, Marvin E., 93
Munn, Norman L., 34
Munroe, M. E., 173
Murie, Olaus J., 174
Murphy, Glenn, 93
Murray, Guy L., 132
Myrbäck, Karl. See Sumner, James B., & Myrbäck, Karl, 117, 158

—N—

Nachtrieb, Norman H., 13
Nádai, A. L., 14
Nash, Kevin L., 133
National Society for Crippled Children and Adults, Incorporated, 133
Needham, C. H. Latimer-. See Latimer-Needham, C. H., 31
Nelkon, Michael, 14

Nelson, Alexander, 174
Neville, Leslie E., 133
Newlove, George Hillis, & Garner, S. P., 14, 74
Newton, T. G., & von Bleicken, Bleick, 74
Neyman, Jerzy, 14
Nicholson, E. M., 114
Noakes, George R., 93
Noll, Edward M., 153
Noll, Edward M., & Mandl, Matthew, 133
Noller, Carl R., 153
Nordell, Eskel, 114
North, Sydney H., 174
Northcott, John A., 74

—O—

Obert, Edward F., 34
Oehler, Christian, 14
Oelke, William C., 14
Ogilvie, William Heneage, & Thompson, W. A. R., 93
Ogle, Kenneth N., 133
Oil-Heat Institute of America, Incorporated, 174
Oldenburger, Rufus, 114
Olsen, Lester, 34
Organic reactions, 191
O'Sullivan, T. P., 34
Othmer, Donald F. See Encyclopedia of chemical technology, 146

—P—

Packer, Harry Q., & Waterman, M. E., 192
Pannett, W. E., 174
Panzer, Irvin R. M., 35
Parker, Harry, 153
Parker, Philip, 153
Parker, Williard E., & Kleemeier, R. W., 192
Parker-Rhodes, A. F., 14
Parsons, John, 114
Parsons, L. E., & Stearns, J. K., 94
Partington, James R., 14, 55, 153
Patterson, Austin M., 35
Paul, Martin A., 154
Pauling, Linus, 74
Paull, A. V., & Gallaway, J., 174
Pearl, Richard M., 133
Pearse, Arthur S., 154
Pearse, R. W., & Gaydon, A. G., 35
Pease, Edward M., 134
Peatfield, A. E., 94, 154
Peck, Lyman C., 192
Pender, Harold, & McIlwain, Knox, 53
Penfield, Wilder, & Rasmussen, Theodore, 15
Pennington, A. M., 35
Penrose, Harold E., & Boulding, R. S. H., 74
Perrie, D. W., 94
Perry, J. W., 134. See also Casey, Robert S., & Perry, J. W., 164
Persico, Enrico, 55
Persons, Stow, 175
Peters, James Lee, 175
Peters, Raymond W., 35
Peterson, Carlton A., & Wright, M. D., 114
Peterson, Harold A., 175
Peterson, Roger Tory, 192
Pfeiffer, J. P., 15
Phelps, Earle B., 74
Phillips, H. B., 192
Phillips, Reginald S., 192
Philpott, Stuart F., 114
Pierce, David E., 94
Pierce, John R., 55
Pieters, H. A. J., & Creyghton, J. W., 75
Piganiol, Pierre, 154
Pike, Oliver G., 15
Pinckheard, J., 154
Pincus, Gregory, & Thimann, K. V., 15
Pitt, Frances, 134
Plummer, Harry C., 75
Pohl, John F., 94
Pollard, Ernest C., & Davidson, W. L., 75
Pollitt, Charles A. H., 134
Pope, Alan, 114, 154
Porter, A., 115
Potter, Mary, 192
Potter, Van R., 15
Power, F. D., 75
Pratt, Wallace E., & Good, Dorothy, 36
Prentiss, Augustin M., 154
Prianishnikov, Dimitrii N., 175
Progress in biophysics and biophysical chemistry, 75
Progress in nuclear physics, 115
Prosser, C. Ladd, 115
Puckle, O. S., 115
Pulk, E. S., & Murphy, E. A., 175
Pullen, Roscoe L., 134
Pumphrey, Fred H., 192
Pyenson, Louis, 192

—Q—

Quiring, Daniel P., 94

—R—

Race, R. R., & Sanger, Ruth, 76
Radcliffe, John W., 55
Radimersky, George, 15
Rainich, G. Y., 56
Raistrick, Arthur, 15
Rait, J. R., 76
Raman, Chandrasekhara V., 134
Rand, Herbert W., 36
Randall, J. T. See Progress in biophysics and biophysical chemistry, 75
Rautenstrauch, Walter, & Villers, Raymond, 76
Raven, Henry Cushier, 56
Rayner, William H., 134
Read, John, 155
Reebel, Dan, 56
Reed, Brian, 16, 76
Reed, Myril B., & Reed, G. B., 134
Reichenbach, Hans, 116
Remington, John S., 16
Renton, Robert N., 175
Review of textile progress, 1949, 76
Rhodes, A. F. Parker-. See Parker-Rhodes, A. F., 14
Ricci, John E., 135
Rich, George R., 175
Richards, E. S., 56
Richardson, John S., & Cahoon, G. P., 94
Richardson, Leon B., & Scarlett, A. J., 155
Richdale, L. E., 193
Richmond, Donald E., 16
Richter, George Holmes, 116
Rider, John F., 155
Rider, John F., & Uslan, S. D., 16
Rieman, William, 135
Ringuet, Louis Leprince-. See Leprince-Ringuet, Louis, 111
Rinkel, Herbert J., 135
Ripper, William, 36
Ritchie, William B., 77
Ritchie, William E., 193
Ritter, Leo J., jr., & Paquette, R. J., 175
Roberson, E. C., 77
Roberts, Howard C., 155
Robinson, A. T. C., 116
Robinson, Clark Shove, & Gilliland, E. R., 77
Robinson, Frank A., 155
Robinson, Robert F., & Novak, D. H., 135
Robnett, Ronald H., 155
Robson, J. M., & Keele, C. A., 16
Roche, John M., 193
Rochow, Eugene G., 176
Rodden, Clement J., 56
Roe, Harry B., 16
Rogers, Bruce A., 156
Rogers, T. S., 193
Roller, Duane, 16
Rolt, Lionel T. C., 77
Root, Huber H., 77
Rose, H. Townshend-. See Townshend-Rose, H., 118
Rose, Walter, 36
Rosenblueth, Arturo, 116
Rosenfeld, Leon, 156
Ross, Frank, jr., 135
Rossini, Frederick D., 36
Rosskopf, Myron F., 193
Roth, S. G. See Shamos, Morris H., & Roth, S. G., 57
Rotheram, L. A., 176
Rouse, Hunter, 56
Rowan, Joseph R., & Blankertz, D. F., 193
Rubey, Harry, 135
Rubin, Maurice, 156
Rule, John T., & Watts, E. F., 176
Rumford, Frank, 116
Russ, S., & Clark, L. H., 156
Russell, E. John, 56, 94
Russell, William L., 193
Ryder, John D., 156

—S—

Sachs, George, 135
Sacks, Jacob, 95
Safford, Edward L., jr., 135
Salmon, William H., & Simons, E. N., 176
Sampson, Henry, 194
Samuels, Harry, & Pollard, R. S. W., 77
Sandell, Ernest B., 77
Sarles, W. B., 116
Saunders, A. H., 136
Sawitz, William G., 57
Sayres, Paul, 95
Scanlan, Robert H., & Rosenbaum, Robert, 136
Scarborough, James B., 78
Schack, William, 16
Schackne, Stewart, & Drake, N. D., 37
Scheinfeld, Amram, 95
Schell, Erwin H., 156
Schilling, O. F. G., 95
Schmidt, Paul F., 176
Schonland, B. F. J., 116
Schrödinger, Erwin, 78
Schurr, Sam H., & Marschak, Jacob, 37
Schwab, Glenn O., 96
Schwenck, J. R., & Martin, R. M., 156
Schwitzer, M. K., 156
Scott, W. L., 17
Scott Blair, George W., 157
Scroggie, Marcus G., 78
Seabright, Lawrence H., 57
Seehafer, Eugene F., & Laemmar, J. W., 117
Sells, M. P., 117
Selwood, P. W., 57
Selwyn, E. W. H., 57
Shamos, Morris H., & Roth, S. G., 57
Shephard, Harold H., 136
Sherman, Henry C., 17

Sherman, Henry C., & Lanford, C. S., 157
Sherwood, Noble Pierce, 177
Shirley, David Allen, 177
Shockley, William, 117
Shubin, John A., & Madeheim, Huxley, 157
Sigerist, Henry E., 58
Silver, Bernard E., 136, 177
Simmons, Harry, 58
Simmons, Maitland P., 157
Simons, Joseph H., 96
Singer, Ferdinand L., 157
Sinnott, Edmund W., 17, 58
Siu, Ralph G. H., 194
Skolnik, David, & Hartley, M. C., 136
Skoog, Folke, 136
Sleeper, Milton B., 96
Slottman, George V., & Roper, E. H., 78
Smalley, Oliver, 58
Smart, E. Howard, 177
Smart, W. M., 96
Smiley, Dean F., & Gould, A. G., 157
Smith, Gilbert M., 117
Smith, Kenneth M., 194
Smoluchowski, R., 194
Smythe, William R., 78
Snyder, Laurence H., 136
Sodeman, William A., 96
Soden, A. L., 194
Sommerfeld, Arnold, 17
Sorenson, Harry A., 158
Sothern, John W. M., 17
Southworth, George C., 37
Special Libraries Association —Science-Technology division, 177
Speller, Frank N., 177
Spiers, H. M., 37
Spottiswoode, Raymond, 158
Sprague, Roderick, 96
Spratt, H. Philip, 194
Spriegel, William R., & Towle, J. W., 195
Stafford, George T., 97
Starling, Sydney G., & Woodall, A. J., 136
Staten, Hi W., & Jones, M. D., 178
Statham, I. C. F., 158
Stearns, Reid F., 97
Stebbins, G. Ledyard, jr., 38
Steinbach, Otto F., & King, C. V., 97
Steinhaus, Hugo, 17
Stephens, Raymond W. B., & Bate, A. E., 97
Stephenson, J. Newell, 17
Stepniewski, Wieslaw Z., 18
Stifler, W. W., jr. See Engineering Research Associates, Incorporated, 6
Stiles, Walter, 137
Still, Alfred, 137
Stimson, Russell L., 178
Stoever, Herman J., 158
Stokes, John W., 137
Stone, Robert S., 178
Stoney, J., 58
Storch, Henry H., 137
Stout, Melville B., 58
Stover, Ernest L., 117
Sullivan, John W. W., 97
Sumner, James B., & Myrbäck, Karl, 117, 158
Sutcliffe, Arthur, 97
Suter, G. M., 137
Sutherland, Hale, & Bowman, H. L., 137
Sweet, Richard H., 59
Swift, Ernest, 159
Swinburne, James, 118

—T—

Taggart, Arthur F., 98
Tannenbaum, Albert, 98
Taylor, F. Sherwood, 118
Taylor, Frank J., 195
Taylor, Frank J., & Welty, E. M., 18
Taylor, John W. R., & Allward, M. F., 79
Taylor, William Randolph, 59
Tead, Ordway, 137
Teichmann, Frederick K., 137
Temmer, G. M. See Persico, Enrico, 55
Thimann, K. V. See Pincus, Gregory, & Thimann, K. V., 15
Thoma, Kurt H., 159
Thomas, Harold E., 178
Thompson, A. Beeby, 98
Thomsen, Thomas C., 98
Thomson, Louis M. Milne-. See Milne-Thomson, Louis M., 132
Thomson, W. A. R. See Ogilvie, William Heneage, & Thomson, W. A. R., 93
Thomson, William Tyrrell, 79
Thorndike, Lynn, 38
Thornton, D. Laugharne, 138
Thorpe's dictionary of applied chemistry, 118
Thurber, Packard, 38
Tiedeman, Walter D. See Phelps, Earle B., 74
Timbie, William H., 178
Timmermans, Jean, 18
Timoshenko, Stephen, & Young, D. H., 179
Tippett, Leonard H. C., 79
Tiratsoo, Eric N., 138
Tompkins, C. B. See Engineering Research Associates, Incorporated, 6
Town, Harold C., 159
Townshend-Rose, H., 118
Tranter, Clement J., 179
Treloar, Alan E., 159
Tremain, Arthur, 138
Tressler, Donald K., 98
Tressler, Donald K., & Lemon, J. M., 138
Treybal, Robert E., 138
Trimble, H. C., 179
Trinks, W., 195
Trout, George Malcolm, 59
Tucker, William C., 179
Turner, Francis J., & Verhoogen, Jean, 159
Twyman, Frank, 118
Tyrrell, William, 138

—U—

United Steel Companies, Limited, 119
Updike, Daniel Berkeley, 179
Uren, Lester C., 18
Urquhart, Leonard C., 18
Urquhart, Lewis K., & Boyce, C. W., 138

—V—

Vail, Derrick, 59
Valaer, Peter, 18
Vale, C. P., 19
Vale, E., 195
Vance, Lawrence L., 19
Van der Pol, B., & Bremmer, H., 79
Van Ness, K., & van Westen, H. A., 159
Van Praagh, Gordon, 99
Varney, Alex, 59
Vawter, Jamison, & Clarke, J. G., 38
Veal, Thomas H. P., 79
Venable, William Mayo, 19
Venk, Ernest A., 179
Verrill, A. Hyatt, 119
Ver Wiebe, W. A., 99
Vickerstaff, Thomas, 59
Vigoureux, P., 139
Von Frisch, Karl. See Frisch, Karl von, 66
Vorwald, Arthur J., 60

—W—

Wade, Harry H., 99
Wahl, A. C., & Bonner, N. A., 195
Wahlstrom, Ernest E., 159
Wakelin, J. H. See Engineering Research Associates, Incorporated, 6
Wald, Abraham, 60
Walker, John C., 99
Walker, Ronald C., 79
Ward, Alger L., & Roberts, W. J., 196
Waters, William A., 79
Watson, Herbert M., 139
Watson, Stephen J., 179
Watson, Stephen J., & Smith, A. M., 196
Weber, Ernst, 19
Weber, Robert L., 19
Weill, Gerald F., 119
Weiss, E. B., 139
Weiss, Marvin D., 179
Weissberger, Arnold, 159
Welchman, W. Gordon, 196
Weller, R. F., 196
Welsh, R. J., & Waller, Geoffrey, 160
Wendt, Gerald, 119
Wensley, Edith, 119
Wertheim, Edgar, 160
West, Clarence J. See American Paper and Pulp Association, 182
West, L. S., 196
West, T. F., 99
Westwood, W., & Mayer, A., 99
Wetmore, Frank E., & LeRoy, D. J., 139
Weyl, Charles, & Warren, S. R., jr., 197
Whatmough, W. A., 180
Wheeler, Russel C., 19
Wheeler, W. A., 19
Wheelwright, William Bond, 120
White, T. A. Blanco, 38
Whitehead, John R., 39
Whitehead, Stanley, 160
Whitmore, Frank C., 160
Whittier, Earle O., & Webb, B. H., 99
Wiener, Norbert, 39
Wigglesworth, V. B., 197
Wilkinson, Denys H. ,39
Willcox, R. R., 19
Williams, H. Paul, 80
Williams, Roger, 180
Williams, Roger J., 20
Williams, Russell R., 39
Willis, Arthur J., 120
Wilson, J. G., 139
Wilson, Warren E., 60
Wilson, William, 80, 180
Wimpress, R. N., 80
Winchell, Alexander N., & Winchell, Horace, 100
Winchester, Albert M., 197
Wing, Leonard W., 180
Winge, Ojvind, 100
Winiberg, Frederick, 39
Winters, Robert K., 197
Wise, F. C., 40
Wise, S. J., 140
Wishnefsky, N., 20
Witton, Catherine Jones, 40
Woldman, Norman E., & Gibbons, R. C., 100
Wolfe, Thomas, 40
Woodcock, Hubert B. D., & Stearn, W. T., 20
Woodruff, Everett, B., & Lammers, H. B., 80
Worsnap, B. L., & Chalklin, F. C., 20

Wright, Donald A., 140
Wright, W. D., 100
Wyckoff, Ralph W. G., 197

—Y—

Youden, William J., 197
Young, J. Z., 60
Young, John McHardy, 60
Young, Leona E., & Porter, C. W., 120
Youngken, Heber W., 180
Yule, G. Udny, & Kendall, M. G., 120

—Z—

Zahm, Albert F., 20
Zaleznik, A., 197
Zeuner, Frederick E., 140
Zimmerman, O. T., & Lavine, Irvin, 40

Erratum in Volume 17

The following entry (accurately copied from the review itself) is incorrect, and has been corrected in making the Author Index.

For "**Hawkins**, Jacob, & **Hawkins**, G. A." (p.9) read **Jakob**, Max, & **Hawkins**, G. A.

New and used Books on all Subjects, in all Languages
An extensive Search Service for out-of-print books
Subscriptions to all periodicals, domestic and foreign
We purchase libraries—large and small—sets or runs of periodicals
STECHERT-HAFNER, Inc.
Established New York 1872
31 EAST TENTH STREET NEW YORK 3, N. Y.